



STANDARD MANUAL OF TOOLS & EQUIPMENT FOR TVET LABS & WORKSHOPS



NATIONAL VOCATIONAL & TECHNICAL TRAINING COMMISSION (NAVTTC)

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Message of Executive Director NAVTTC

As the Executive Director of the National Vocational and Technical Training Commission (NAVTTC), it is with great pride and a deep sense of responsibility that I officially present the first-ever **“Standard Manual for Tools and Equipment for TVET Workshop Development”** for Pakistan’s Technical and Vocational Education and Training (TVET) sector.



This landmark manual is a comprehensive and meticulously developed resource that outlines standardized guidelines for the specifications and quantities of tools, equipment, machinery, and essential consumables required to establish and upgrade TVET laboratories and workshops. Designed to cater to both conventional and Competency-Based Training & Assessment (CBT&A) modes of training, it serves as a foundational reference to ensure quality, uniformity, and alignment with international best practices across various trades and occupations.

Recognizing the critical role of modern infrastructure in raising the standard of technical and vocational education, NAVTTC has prioritized the development of evidence-based, demand-driven, and forward-looking training solutions. This manual represents a significant step towards our broader goal of equipping Pakistan’s workforce with the skills necessary to thrive in the era of the Fourth Industrial Revolution (Industry 4.0).

We urge all relevant stakeholders—including government bodies, TVET institutions, development partners, and implementing agencies—to adopt and integrate this manual into their planning, procurement, and development processes. Its successful implementation will not only elevate the quality and relevance of training programs but also contribute meaningfully to Pakistan’s socio-economic development.

I extend my sincere appreciation to all those who contributed to the creation of this manual. Your dedication and expertise have laid the groundwork for a stronger, more resilient, and future-ready TVET ecosystem in Pakistan.

Muhammad Aamir Jan
Executive Director, (NAVTTC)

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Introduction

The National Vocational and Technical Training Commission (NAVTTC) is dedicated to enhancing and standardizing Pakistan's Technical and Vocational Education and Training (TVET) system. To achieve this, NAVTTC has initiated several key measures, including the development of Competency-Based Training & Assessment (CBT&A) frameworks, outcome-based curricula, robust assessment systems, comprehensive lesson plans, stringent criteria for trainer and trainee selection, and the formulation of quality assurance and accreditation manuals.

In alignment with the demands of the Fourth Industrial Revolution (Industry 4.0), NAVTTC is committed to developing a skilled workforce capable of meeting contemporary challenges. This includes the implementation of the National Vocational Qualification Framework (NVQF), which classifies the skills, knowledge, and competencies required for various occupations, thereby facilitating better job prospects and career mobility for learners.

This manual serves as a comprehensive guide to the standards and specifications necessary for the development of modern TVET infrastructure. It details the complete specifications and quantities of tools, equipment, machinery, and essential consumables required for TVET laboratories and workshops across various trades and occupations, catering to both conventional and CBT&A modes of training. By adhering to these guidelines, TVET institutions and stakeholders can design and implement facilities that not only meet current educational and training needs but also anticipate future industry requirements. Collectively, we can ensure that Pakistan's TVET sector remains responsive, dynamic, and aligned with global standards, ultimately contributing to the nation's socio-economic development

Purpose

The purpose of this manual is to provide comprehensive guidelines and safety protocols for the use, maintenance, and management of tool equipment in Technical and Vocational Education and Training (TVET) programs through the TVETS sector of Pakistan.

This manual aims to:

1. Ensure safety: Promote safe working practices and minimize risks associated with tool equipment.
2. Standardize procedures: Establish standardized guidelines for tool equipment usage, maintenance, and management.
3. Support skill development: Provide TVET students and instructors with the knowledge and skills necessary for effective tool equipment operation.
4. Resource optimization: Provide guidance on tool equipment maintenance, storage, and inventory management, helping TVET institutions optimize their resources.
5. Contain Machines, Attachments, Accessories, Consumable Materials, Tools and Equipment of various Trades which will be used for Training on CBT and Non- CBT Programs of Level-IV, advance for Level V and also for their Assessments Purpose well.

By creating a comprehensive manual of tool equipment for TVET Sector of Pakistan this manual aims to support the delivery of high-quality TVET programs and provide students and instructors access to reliable and accurate

information, promoting a safe and effective learning environment.

Scope

This manual covers tool equipment used in various Technical and Vocational Education and Training (TVET) programs.

It provides comprehensive information on:

- i. Hand tools: Description, usage, and safety guidelines for hand tools commonly used in TVET programs.
- ii. Power tools: Description, usage, and safety guidelines for power tools used in TVET programs.
- iii. Specialized equipment: Description, usage, and safety guidelines for specialized equipment used in specific TVET programs.

This manual aims to provide TVET instructors, students, and technical staff with the knowledge and guidelines necessary for safe and effective use of tool equipment. The recommended workshop size for all trades is (25-35) feet x (16-25) feet

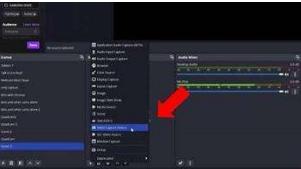
1. IT Sector

Lab 01: Tools and Equipment of IT Lab

(FOR CLASS OF 15 to 25 Students)
Conventional IT Lab

Sr No.	Name	Description	Image	CBT	Non-CBT
1	Workstations (Computers)	Intel Core i5/i7 (or AMD Ryzen 5/7) Minimum 32GB DDR5 (64GB+ for 3D/video) 1TB NVMe SSD + 4TB External HDD/SSD NVIDIA RTX 4080 / AMD Radeon RX 7900 / Apple GPU (M2 Ultra) Windows 11 Pro / macOS Sonoma		25	25
2	Scanner	6400 dpi resolution, color accuracy, flatbed		1	1
3	Monitors (Color-Accurate Displays)	Size 27"-32" Resolution: 4K UHD (3840×2160) Color Gamut 99% Adobe RGB / DCI-P3 Panel IPS / Calibrated Calibration Hardware calibration supported		25	25
4	Headphones	Closed-back, flat response		25	25
5	Software Suite (Licenses Required)	Python, Node.js, Java, C++ Visual Studio Code, Eclipse, IntelliJ Docker, Kubernetes, Jenkins Git, GitHub, GitLab Ansible, Terraform Jupyter Notebook / Jupyter Hub TensorFlow, Py Torch, OpenCV		25	25
6	External SSD	2TB, USB-C 3.2		5	5
7	RAID Storage	8TB–40TB, RAID 5, NAS-ready		25	25

Sr No.	Name	Description	Image	CBT	Non-CBT
8	Router	Wi-Fi 6E, 2.5Gb Ethernet		1	1
9	Switch	Gigabit/10GbE, 8–16 ports		1	1
10	NAS	8–12 bays, 10GbE support		1	1
11	Desk	Height adjustable, 140cm+ width		25	25
12	Chair	Ergonomic, lumbar support		25	25
13	Cable Management	Velcro ties, raceways, trays		25	15
14	Multimedia Projector	Multimedia Projector (3000-3200 Lumens) with Laser Pointer and tripod screen (6" x 8") + adjustable stand.		1	1
15	Printer:	Up to 40 PPM 600 MHz 1200 by 1200 dpi 128 MB RAM Legal, A4 & letter size paper. 2 Paper Tray(s), Duplex Printing 1 Hi-Speed USB 2.0; 1 Host USB; 1 Gigabit Ethernet 10/100/1000TX, Microsoft windows Xp/7/ 8/10 and Linux supportive. 01 Year minimum Warranty.		1	1

Sr No.	Name	Description	Image	CBT	Non-CBT
16	Scanner	ADF Up to 1200 x 1200 dpi (color and mono) For text & images: PDF, JPEG, PNG, BMP, TIFF, TXT (text), RTF (rich text) and searchable PDF. Up to 20 ppm 64 MB, 120 MHZ Standard Hi Speed 2.0		1	1
17	Smart LED TV	43 Inch Smart LED TV (At least Changlong Ruba or equivalent)		1	1
18	Smart Board / Interactive Display	65–75", 4K, touch-enabled		1	1
19	Lecture Recording	OBS Studio with webcam & mic		1	1
20	Wireless Presentation Clicker	Clicker		1	1

Lab 02: Tools and Equipment of Graphics and Media Production

(FOR CLASS OF 15 to 25 Students)

Sr No.	Tools/ Equipment	Description	Image	CBT	Non-CBT
1	Workstations (Computers)	Intel i9-14900K / AMD Ryzen 9 7950X / Apple M2 Ultra Minimum 32GB DDR5 (64GB+ for 3D/video) 1TB NVMe SSD + 4TB External HDD/SSD NVIDIA RTX 4080 / AMD Radeon RX 7900 / Apple GPU (M2 Ultra) Windows 11 Pro / macOS Sonoma		25	25
2	Drawing Tablet	8192 pressure levels, tilt recognition		25	25
3	Pen Display	4K display, 99% Adobe RGB, pen with 8192 levels		25	15
4	Scanner	6400 dpi resolution, color accuracy, flatbed		1	1
5	Camera	4K/6K video, full-frame sensor		5	3
6	Monitors (Color-Accurate Displays)	Size 27"–32" Resolution: 4K UHD (3840×2160) Color Gamut 99% Adobe RGB / DCI-P3 Panel IPS / Calibrated Calibration Hardware calibration supported		25	15
7	Video Camera	4K/6K RAW, large sensor		5	5

Sr No.	Tools/ Equipment	Description	Image	CBT	Non-CBT
8	Tripod	Fluid head, 3-section legs		5	3
9	Stabilizer	3-axis gimbal, DSLR/Mirrorless support		5	3
10	Lighting	Bi-color LED, CRI 95+, dimmable		5	3
11	Green Screen	Chromakey fabric, adjustable frame		5	3
12	Microphone	Condenser/XLR, cardioid pattern		5	5
13	Audio Interface	24-bit/192kHz, XLR inputs		1	1
14	Headphones	Closed-back, flat response		25	25
15	Studio Monitors	5"-8" drivers, flat EQ		1	1

Sr No.	Tools/ Equipment	Description	Image	CBT	Non-CBT
16	Software Suite (Licenses Required)	Design and Layout: Adobe Photoshop, Illustrator, InDesign Adobe Premiere Pro, Final Cut Pro, DaVinci Resolve, Video Editing software Adobe After Effects + Red Giant plugins Motion Graphic Software Blender, Autodesk Maya, Cinema 4D 3d/ animation software Adobe Audition, Logic Pro, Avid Pro Tools, Auditor Software Figma, Adobe XD, Sketch, Web/UX DaVinci Resolve Studio, Color Grading		25	25
17	External SSD	2TB, USB-C 3.2		5	3
18	RAID Storage	8TB–40TB, RAID 5, NAS-ready		25	15
19	Router	Wi-Fi 6E, 2.5Gb Ethernet		1	1
20	Switch	Gigabit/10GbE, 8–16 ports		1	1
21	NAS	8–12 bays, 10GbE support		1	1
22	Soundproofing	Acoustic foam panels, bass traps		5	3
23	Lighting	RGB or daylight-balanced LED		5	3

Sr No.	Tools/ Equipment	Description	Image	CBT	Non-CBT
24	Desk	Height adjustable, 140cm+ width		25	25
25	Chair	Ergonomic, lumbar support		25	25
26	Cable Management	Velcro ties, raceways, trays		25	15
27	Motion Capture	Rokoko Smart Suit Pro		5	3
28	VR Production	Meta Quest 3 or HTC Vive XR Elite		5	3
29	3D Printing	Prusa i3 MK4 / Creality K1		5	3
30	Color Grading Panel	Blackmagic Design Mini Panel		5	3
31	Studio Lights Along with accessories	Studio Umbrella Lamination of studio wall (Chroma and background 10x10 feet) Camera mounted flash TTL Octa 90cm & 180cm with flash Reflectors Monopod Tripod Tungsten 350watt with accessories Fluorescent Light 100Watt with accessories Fluorescent Light 250Watt with accessories (Or all above equivalent or higher specs.)		5	3

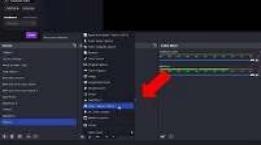
Sr No.	Tools/ Equipment	Description	Image	CBT	Non-CBT
32	Multimedia Projector	Multimedia Projector (3000-3200 Lumens) with Laser Pointer and tripod screen (6" x 8") + adjustable stand.		1	1
33	Printer:	Up to 40 PPM 600 MHz 1200 by 1200 dpi 128 MB RAM Legal, A4 & letter size paper. 2 Paper Tray(s), Duplex Printing 1 Hi-Speed USB 2.0; 1 Host USB; 1 Gigabit Ethernet 10/100/1000TX, Microsoft windows Xp/7/ 8/10 and Linux supportive. 01 Year minimum Warranty.		1	1
34	Scanner	ADF Up to 1200 x 1200 dpi (color and mono) For text & images: PDF, JPEG, PNG, BMP, TIFF, TXT (text), RTF (rich text) and searchable PDF. Up to 20 ppm 64 MB, 120 MHZ Standard Hi Speed 2.0		1	1
35	Smart LED TV	43 Inch Smart LED TV (At least Changlong Ruba or equivalent)		1	1

Lab 03: Tools and Equipment of Advanced High-Tech IT Lab

(For Class Of 15 To 25 Students)

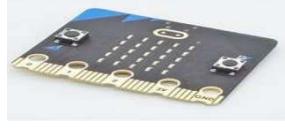
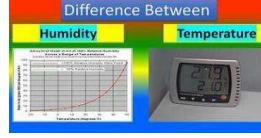
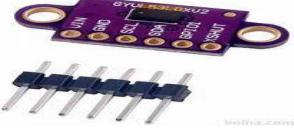
S. No.	Tools/ Equipment	Description	Image	CBT	Non-CBT
1	Workstations (Computers)	Intel i9-14900K / AMD Ryzen 9 7950X / Apple M2 Ultra Minimum 32GB DDR5 (64GB+ for 3D/video) 1TB NVMe SSD + 4TB External HDD/SSD NVIDIA RTX 4080 / AMD Radeon RX 7900 / Apple GPU (M2 Ultra) Windows 11 Pro / macOS Sonoma		25	25
2	Scanner	6400 dpi resolution, color accuracy, flatbed		1	1
3	Monitors (Color-Accurate Displays)	Size 27"-32" Resolution: 4K UHD (3840×2160) Color Gamut 99% Adobe RGB / DCI-P3 Panel IPS / Calibrated Calibration Hardware calibration supported		25	25
4	Headphones	Closed-back, flat response		25	25
5	Software Suite (Licenses Required)	Python, Node.js, Java, C++ Visual Studio Code, Eclipse, IntelliJ Docker, Kubernetes, Jenkins Git, GitHub, GitLab Ansible, Terraform Jupyter Notebook / Jupyter Hub TensorFlow, PyTorch, OpenCV		25	25
6	External SSD	2TB, USB-C 3.2		5	5
7	RAID Storage	8TB–40TB, RAID 5, NAS-ready		25	25

S. No.	Tools/ Equipment	Description	Image	CBT	Non-CBT
8	Router	Wi-Fi 6E, 2.5Gb Ethernet		1	1
9	Switch	Gigabit/10GbE, 8–16 ports		1	1
10	NAS	8–12 bays, 10GbE support		1	1
11	Soundproofing	Acoustic foam panels, bass traps		5	5
12	Lighting	RGB or daylight-balanced LED		5	5
13	Desk	Height adjustable, 140cm+ width		25	25
14	Chair	Ergonomic, lumbar support		25	25
15	Cable Management	Velcro ties, raceways, trays		25	25
16	Multimedia Projector	Multimedia Projector (3000-3200 Lumens) with Laser Pointer and tripod screen (6" x 8") + adjustable stand.		1	1

S. No.	Tools/ Equipment	Description	Image	CBT	Non-CBT
17	Printer:	Up to 40 PPM 600 MHz 1200 by 1200 dpi 128 MB RAM Legal, A4 & letter size paper. 2 Paper Tray(s), Duplex Printing 1 Hi-Speed USB 2.0; 1 Host USB; 1 Gigabit Ethernet 10/100/1000TX, Microsoft windows Xp/7/ 8/10 and Linux supportive. 01 Year minimum Warranty.		1	1
18	Scanner	ADF Up to 1200 x 1200 dpi (color and mono) For text & images: PDF, JPEG, PNG, BMP, TIFF, TXT (text), RTF (rich text) and searchable PDF. Up to 20 ppm 64 MB, 120 MHZ Standard Hi Speed 2.0		1	1
19	Smart LED TV	43 Inch Smart LED TV (At least Changlong Ruba or equivalent)		1	1
20	Smart Board / Interactive Display	65–75", 4K, touch-enabled		1	1
21	Lecture Recording	OBS Studio with webcam & mic		1	1
22	Wireless Presentation Clicker	Clicker		1	1
23	User Policy Control	GPO, Role-based access, MFA		1	1
24	Laptops (for portable use)	Processor: Intel Core i5/i7 or equivalent RAM: 8 GB or more Storage: 256 GB SSD or higher Operating System: Windows 10/11, macOS, or Linux (depending on institute preference) Display Size: 13" to 15"		25	25

Lab 04: Tools and Equipment of Internet of Things (IoT)

(For Class Of 15 To 25 Students)

Sr No.	Tools/ Equipment	Description	Image	CBT	Non-CBT
1	Workstations (Computers)	Intel i9-14900K / AMD Ryzen 9 7950X / Apple M2 Ultra Minimum 32GB DDR5 (64GB+ for 3D/video) 1TB NVMe SSD + 4TB External HDD/SSD NVIDIA RTX 4080 / AMD Radeon RX 7900 / Apple GPU (M2 Ultra) Windows 11 Pro / macOS Sonoma		25	25
2	Arduino Uno R4 / Mega 2560	8-bit, 16 MHz, GPIO		5	5
3	ESP32 DevKit V1	ESP32 DevKit V1		5	5
4	STM32F746 Nucleo Board	2-bit ARM Cortex-M7, RTOS		5	5
5	Particle Boron (LTE)	Particle Boron (LTE)		5	5
6	Micro: bit v2	Bluetooth, accelerometer, user-friendly		5	5
7	Temperature & Humidity	DHT22, BME280		5	5
8	Distance	Ultrasonic HC-SR04, VL53L0X (laser)		5	5

Sr No.	Tools/ Equipment	Description	Image	CBT	Non-CBT
9	Servo Motors	MG995, SG90		5	5
10	Scanner	6400 dpi resolution, color accuracy, flatbed		1	1
11	Monitors (Color-Accurate Displays)	Size 27"–32" Resolution: 4K UHD (3840×2160) Color Gamut 99% AdobeRGB / DCI-P3 Panel IPS / Calibrated Calibration Hardware calibration supported		25	25
12	Software Suite (Licenses Required)	Arduino IDE, PlatformIO Python, C++, Node.js VS Code, Thonny, Jupyter Lab Inker cad Circuits (easy and online) Proteus (simulation + PCB design) KiCad, Fritzing, Eagle		25	25
13	External SSD	2TB, USB-C 3.2		5	5
14	RAID Storage	8TB–40TB, RAID 5, NAS-ready		25	25
15	Router	Wi-Fi 6E, 2.5Gb Ethernet		1	1
16	Switch	Gigabit/10GbE, 8–16 ports		1	1

Sr No.	Tools/ Equipment	Description	Image	CBT	Non-CBT
17	NAS	8–12 bays, 10GbE support		1	1
18	Multimedia Projector	Multimedia Projector (3000-3200 Lumens) with Laser Pointer and tripod screen (6" x 8") + adjustable stand.		1	1
19	Printer:	Up to 40 PPM 600 MHz 1200 by 1200 dpi 128 MB RAM Legal, A4 & letter size paper. 2 Paper Tray(s), Duplex Printing 1 Hi-Speed USB 2.0; 1 Host USB; 1 Gigabit Ethernet 10/100/1000TX, Microsoft windows Xp/7/ 8/10 and Linux supportive. 01 Year minimum Warranty.		1	1
20	Scanner	ADF Up to 1200 x 1200 dpi (color and mono) For text & images: PDF, JPEG, PNG, BMP, TIFF, TXT (text), RTF (rich text) and searchable PDF. Up to 20 ppm 64 MB, 120 MHZ Standard Hi Speed 2.0		1	1
21	Smart LED TV	43 Inch Smart LED TV (At least Changlong Ruba or equivalent)		1	1
22	Network Infrastructure (Switches, Routers, Modems, etc.)	Router: Dual-band Wi-Fi router (Wi-Fi 6 recommended) for optimal performance Switch: 24/48-port Gigabit Ethernet switch for wired connections Firewall: UTM (Unified Threat Management) for enhanced security Wired Network Cable: Cat 6 or Cat 6A cables for high-speed networking Access Points (APs): High-quality APs for wireless connectivity across the lab		1	1

Sr No.	Tools/ Equipment	Description	Image	CBT	Non-CBT
23	Interactive Whiteboard or Smartboards	Screen Size: 65" to 75" (depending on classroom size) Resolution: Full HD (1080p) or 4K for clarity Interactive Features: Multi-touch support, built-in software for collaboration, wireless connectivity Connectivity: HDMI, USB, and wireless options for easy device pairing		1	1
24	UPS (Uninterruptible Power Supply)	Capacity: 1kVA to 3kVA (depending on the lab's total power consumption) Type: Line-interactive or online UPS for reliable power backup Battery Life: At least 30–45 minutes of backup time for a smooth shutdown		1	1
25	Network Attached Storage (NAS)	Storage Capacity: 4TB or more, depending on the volume of data storage needs RAID Configuration: RAID 1 or RAID 5 for redundancy and fault tolerance Network Connectivity: Gigabit Ethernet for fast access		1	1
26	Backup Devices	Type: External hard drives or cloud-based backup solutions Capacity: 1TB or higher for local backups Frequency: Automated scheduled backups		1	1

2. Construction Sector

Lab 01: Tools and Equipment of Furniture and Fixture

(For Class of 15 to 25 Students)

Sr No.	Tools/ Equipment	Description	Image	CBT	Non-CBT
1	Workbenches	Steel frame, wooden or epoxy resin top, 72"x36"		1	1
2	CAD Workstations	Min. Core i7, 32 GB RAM, 1TB SSD, GPU (NVIDIA RTX 3060 or higher), 2K/4K dual monitors		25	5
3	Ergonomic Chairs	Adjustable height, lumbar support, mesh back		25	25
4	Storage Cabinets	Lockable steel or wooden cabinets with shelves		5	5
5	Lighting	LED panel lights (4000K–5000K), adjustable task lamps		1	1
6	Universal Testing Machine (UTM)	Load capacity 10–100kN, software-based analysis		1	1
7	Drop Test Machine	Drop height up to 1.5m, programmable drops		1	1
8	Chair Durability Tester	100,000 cycles, adjustable force and frequency		1	1

Sr No.	Tools/ Equipment	Description	Image	CBT	Non-CBT
9	Moisture Meter	Digital, range 5–40%, accuracy $\pm 1\%$		15	5
10	Formaldehyde Emission Tester	Based on ASTM D6007 or EN 717-2 standards		5	3
11	Color Matching Booth	D65, TL84, UV, CWF light sources		5	3
12	CNC Router	3-axis, 4'x8' bed, min. 3kW spindle		1	1
13	3D Printer	FDM/PLA compatible, 300x300x400mm		1	1
14	Hand Tools	Screwdrivers, chisels, clamps, hammers		10	5
15	Power Tools	Drill, jigsaw, sander, circular saw – branded for safety (Bosch, DeWalt)		1 each	1 each

Lab 02: Tools and Equipment of Building Electrician

(For Class of 15 to 25 Students)

S. No.	Name of Tools/Equipment	Description	Pictures	CBT	Non-CBT
1	Combination Plier	8 inches, insulated		25 Nos.	10
2	Wire Stripper	adjustable gauge, up to 6 mm ²		12 Nos.	10
3	Long Nose pliers	6 inches		12 Nos.	10
4	Insulated Wire Cutter ,	7 inches		25 Nos.	10
5	High Insulation Rubber Hand Gloves	Rated for 1000V, Class 0, electrical insulation, with leather protectors		25 Nos.	10
6	Knife Cutter	retractable blade		12 Nos.	10
7	Chisels	6", 12"		5 Nos. each	10

S. No.	Name of Tools/Equipment	Description	Pictures	CBT	Non-CBT
8	Hammers	200 gm		10 Nos.	10
9	Hack Saws			10 Nos.	10
10	White Boards	(3 x 4 Feet, For Practical)		10 Nos.	10
11	Phillips Screw Driver	No. 1, 2, 3		25 Nos. Each	10
12	Screw Driver	4", 6", 8"		25 Nos. Each	10
13	Measuring Tape	3m		12 Nos.	5
14	Steel Foot Rule			12 Nos.	5
15	Bench Vice	5"		25 Nos.	5
16	Bearing Puller	(3" , 4")		3 Nos. Each	1

S. No.	Name of Tools/Equipment	Description	Pictures	CBT	Non-CBT
17	Drill Machine	(0 – 13 mm)		3 Nos.	1
18	Allen key	Universal Set		2 Nos.	10
19	Clamp meter	0–750V–AC 50 Hz		10 Nos.	5
20	Multi-Meter	A.C./D.C. (Digital)		10 Nos.	5
21	DIN rail strips	35mm, 1 Meter length		5 Dozen	3
22	Single Phase Energy Meter	220V/10–20A		5 Nos.	2
23	Three Phase Energy Meter	(30 A)		3 Nos.	1

S. No.	Name of Tools/Equipment	Description	Pictures	CBT	Non-CBT
24	Breaker DB			5	2
25	Insulation Remover	150 mm		20 Nos.	10
26	Test Boy			12 Nos.	6
27	Hand Electric Drill Machine	with Hammering 0–13 mm		2 Nos.	1
28	Fish Tape			5 Nos.	1
29	Assorted Stationery Items	(Lab/Workshop Infrastructure)		As per Need	1
30	Safety Helmet	Hard hat, ANSI Z89.1 Type I, Class E (Electrical), with chin strap		25 Nos.	20
31	Safety Shoes	Insulated, anti-slip, steel toe, rated for electrical hazards (EH) up to 1000V		25 Pairs	20

S. No.	Name of Tools/Equipment	Description	Pictures	CBT	Non-CBT
32	First Aid Kit	with burn gel, bandages, antiseptic, etc		2 Nos.	1
33	Fire Extinguisher	ABC type, 5 kg, for electrical fires		2 Nos.	1
34	Reflective Safety Vest	High-visibility, ANSI/ISEA 107 Class 2		25 Nos.	1
35	Spirit Level			5 Nos.	1

Lab 02: Consumable Materials of Building Electrician

(For Class of 15 to 25 Students)

S. No.	Name of Items	Description	Pictures	CBT	Non-CBT
1	LED Bulb	0 Watt		6 Dozen	3 Dozen
2	LED Bulb	12 Watt		3 Dozen	2 Dozen
3	Wire	3/0.029" (Black, Red)		5 Coils Each	3 Coils Each
4	Wire	1/0.044"		3 Coils	2 Coils
5	Single Pole MCB	10:00 am		2 Dozen	2 Dozen
6	Double Pole MCB	16 A		2 Dozen	2 Dozen
7	Bell push switch			3 Dozen	3 Dozen
8	One Way Switch			6 Dozen	6 Dozen

S. No.	Name of Items	Description	Pictures	CBT	Non-CBT
9	Two Way Switch		2-WAY SWITCH 	2 Dozen	2 Dozen
10	Two Pin Socket			3 Dozen	3 Dozen
11	Two pin shoes			3 Dozen	3 Dozen
12	Lamp Holder			8 Dozen	8 Dozen
13	Incandescent Lamp	(100 Watt)		1 Dozen	1 Dozen
14	PVC Board	Boxes (1 to 10 holes)		1 Dozen Each	1 Dozen Each
15	Fan Regulators			5 Dozen	5 Dozen

S. No.	Name of Items	Description	Pictures		CBT	Non-CBT
16	Drill Machine Bit Set	(1 – 15 mm)			2 sets Each	2 sets Each
17	Neon Phase Tester	Light Duty Pocket Size			2 Dozen	2 Dozen
18	Channel Ducts	(16x38)			24 Lengths	20 Lengths
19	Channel Ducts	(25x40)			12 Lengths	10 Lengths
20	Steel Screw	(0.5 , 1, 1½” , 2 & ¾”)			6 Packets each	3 Packets each
21	Insulation Tape				6 Dozen	3 Dozen
22	RCBO	(10 A)			1 Dozen	1 Dozen
23	Three pole MCB	32 A			1 Dozen	1 Dozen
24	Four pole MCB	63 A			1 Dozen	1 Dozen

Lab 03: Tools and Equipment of Industrial Electrician

(For Class of 15 to 25 Students)

S. No.	Name of Tools/Equipment	Description	Pictures	CBT	Non-CBT
1	Combination Plier	8 inch, insulated		25 Nos.	15 Nos.
2	Wire Stripper	adjustable gauge, up to 6 mm ²		12 Nos.	5 Nos.
3	Long Nose plier	6 inch		12 Nos.	5 Nos.
4	Insulated Wire Cutter	7 inch		25 Nos.	5 Nos.
5	Grip Plier	10 inch, curved jaw		10 Nos.	5 Nos.
6	Knife Cutter	Retractable blade		12 Nos.	10 Nos.
7	Single Phase Motor			5 Nos.	3 Nos.
8	Hammer	200 gm		10 Nos.	10 Nos.

S. No.	Name of Tools/Equipment	Description	Pictures	CBT	Non-CBT
9	Hack Saws			10 Nos.	10 Nos.
10	White Boards	(3 x 4 Feet, For Practical)		1 Nos.	1 Nos.
11	Phillips Screw Driver	No. 1, 2, 3		25 Nos.	15 Nos.
12	Screw Driver	4", 6", 8"		25 Nos.	15 Nos.
13	Measuring Tape	3m		12 Nos.	10 Nos.
14	Steel Foot Rule			12 Nos.	10 Nos.
15	Bench Vice	5"		10 Nos.	5 Nos.
16	Three Phase Motors			5 Nos.	3 Nos.
17	Drill Machine	(0 – 13 mm)		5 Nos.	3 Nos.

S. No.	Name of Tools/Equipment	Description	Pictures	CBT	Non-CBT
18	Allen key	Universal Set		5 sets.	2 sets.
19	Clamp meter	0–750V–AC 50 Hz		15 Nos.	5 Nos.
20	Multi-Meter	A.C./D.C. (Digital)		15 Nos.	5 Nos.
21	Megger Tester			5 Nos.	3 Nos.
22	Single Phase Energy Meter	220V/10–20A		15 Nos.	5 Nos.
23	Three Phase Energy Meter	(30 A)		15 Nos.	5 Nos.
24	Marking Tape			Few Packs	Few Packs

S. No.	Name of Tools/Equipment	Description	Pictures	CBT	Non-CBT
25	Insulation Remover	150 mm		15 Nos.	10 Nos.
26	Test Boy			10 Nos.	5 Nos.
27	Hand Electric Drill Machine	with Hammering 0–13 mm		2 Nos.	2 Nos.
28	Assorted Stationery Items	(Lab/Workshop Infrastructure)		As per Need	As per Need
29	High Insulation Rubber Hand Gloves	Rated for 5000V, Class 1, electrical insulation, with leather protectors		25 Nos.	25 Nos.
30	Safety Helmet	Hard hat, ANSI Z89.1 Type I, Class E (Electrical), with chin strap		25 Nos.	25 Nos.
31	Safety Shoes	Insulated, anti-slip, steel toe, rated for electrical hazards (EH) up to 5000V		25 Nos.	25 Nos.
32	First Aid Kit	with burn gel, bandages, antiseptic, etc.		3 Nos.	3 Nos.

S. No.	Name of Tools/Equipment	Description	Pictures	CBT	Non-CBT
33	Fire Extinguisher	CO2 type, 5 kg, for electrical fires		2 Nos.	2 Nos.
34	Reflective Safety Vest	CO2 type, 5 kg, for electrical fires		25 Nos.	25 Nos.
35	Lockout/Tagout Kit	Includes padlocks, tags, and hasps for electrical isolation		3 Kits.	3 Kits.
36	VFD	(with DC to AC and Single Phase to Three Phase Conversion Functionality)		1 Nos.	1 Nos.
37	Switchgear	Single Phase, Three Phase		15 Nos. each	10 Nos. each

Lab 03: Consumable Materials of Industrial Electrician

(For Class of 15 to 25 Students)

S. No.	Name of Items	Description	Pictures	CBT	Non-CBT
1	Wire	1/0.044"		6 Coils	3 Coils
2	Wire	3/0.029" (Black, Red)		3 Coils Each	2 Coils Each
3	Wire	7/0.029" (R , Y , B)		2 Coils Each	1 Coils Each
4	Three pole MCB	32 A		1 Dozen	1 Dozen
5	Single Pole MCB	10:00 am		2 Dozen	1 Dozen
6	Double Pole MCB	16 A		2 Dozen	1 Dozen
7	Push Buttons	Industrial (Red , Green)		3 Dozen Each	2 Dozen Each

S. No.	Name of Items	Description	Pictures	CBT	Non-CBT
8	Magnetic Contactor	25 A , 220 V AC		3 Dozen	2Dozen
9	Terminal Block	16mm Din Rail Line Up Mounted		100 pieces	50 pieces
10	Overload Relay	(10 – 16 A , Adjustable)		2 Dozen	1 Dozen
11	Electromechanical Relays	(220 V AC) , 8 Pin , With Bases		2 Dozen	1Dozen
12	Timer Relays	(220 V AC) , 8 Pin , With Bases		3 Dozen	2Dozen
13	DIN rail strips	35mm , 1 Meter length		2 Dozen	2 Dozen
14	Industrial Push Buttons Boxes	(1 to 3 holes)		1.5 Dozen Each	1Dozen Each
15	Indicators	(R , Y , B , G)		3 Dozen Each	2Dozen Each

S. No.	Name of Items	Description	Pictures			CBT	Non-CBT
16	Drill Machine Bit Set	(1 – 15 mm)				3 Each	2 Each
17	Neon Phase Tester	Light Duty Pocket Size				2 Dozen	1 Dozen
18	Channel Ducts	(16x38)				24 Lengths	20 Lengths
19	Channel Ducts	(25x40)				12 Lengths	10 Lengths
20	Voltmeter	Digital (Panel)				1 Dozen	1 Dozen
21	Ammeter	Digital (Panel)				1 Dozen	1 Dozen

S. No.	Name of Items	Description	Pictures	CBT	Non-CBT
22	Emergency Stop Push Button			1 Dozen	1 Dozen
23	Steel Screw	(0.5 , 1, 1½" , 2 & ¾")		6 Packets each	3 Packets each
24	Insulation Tape			6 Dozen	3 Dozen
25	Digital Voltage Current Protector			6 Nos.	6 Nos.
26	PVC Conduit	Flexible		30 Meters	20 Meters
27	Selector Switches			1 Dozen	1 Dozen
28	Enclosure	(Pannel Box)		3 Nos.	3 Nos.

S. No.	Name of Items	Description	Pictures	CBT	Non-CBT
29	Lugs	(1.5 to 8mm)		Few Packs Each	Few Packs Each
30	Cable Glands	(PG7, PG9, PG11, PG 19, PG 21)		Few Packs Each	Few Packs Each
31	Four pole MCB	63 A		1 Dozen	1 Dozen

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Lab 04: Tools and Equipment of Solar PV (Photovoltaic) Technician

(For Class of 15 to 25 Students)

S. No.	Name of Tools/Equipment	Description	Pictures	CBT	Non-CBT
1	Combination Plier	8 inches, insulated		15 Nos.	12 Nos.
2	Wire Stripper	adjustable gauge, up to 6 mm ²		15 Nos.	12 Nos.
3	Long Nose pliers	6 inches		15 Nos.	10 Nos.
4	Insulated Wire Cutter	7 inches		15 Nos.	5 Nos.
5	Grip Plier, 10 inches	10-inch, curved jaw		15 Nos.	5 Nos.
6	Knife Cutter	retractable blade		15 Nos.	5 Nos.
7	Crimping Tool	for MC4 Connectors		15 Nos.	10 Nos.

S. No.	Name of Tools/Equipment	Description	Pictures	CBT	Non-CBT
8	Hammer	200 gm		25 Nos.	12 Nos.
9	Hack Saws			25 Nos.	12 Nos.
10	Compass			10 Nos.	5 Nos.
11	Spanner Set			5 sets	3 sets
12	Phillips Screw Driver	No. 1, 2, 3		25 Nos.	25 Nos.
13	Screw Driver	4", 6", 8"		25 Nos.	25 Nos.
14	Measuring Tape	3m		25 Nos.	12 Nos.
15	Steel Foot Rule			25 Nos.	12 Nos.
16	Solar Power Meter			15 Nos.	5 Nos.

S. No.	Name of Tools/Equipment	Description	Pictures	CBT	Non-CBT
17	Solar Irradiance Meter			5 Nos.	3 Nos.
18	Drill Machine	(0–13 mm)		5 Nos.	3 Nos.
19	Hand Electric Drill Machine	with Hammering (0–13 mm)		5 Nos.	3 Nos.
20	Allen Key	Universal Set		5 sets	3 sets
21	Multi-Meter	A.C./D.C. (Digital)		15 Nos.	10 Nos.
22	Megger Tester			5 Nos	3 Nos.
23	Single Phase Energy Meter	220V/10–20A		15 Nos.	10 Nos.

S. No.	Name of Tools/Equipment	Description	Pictures	CBT	Non-CBT
24	Three Phase Energy Meter	(30 A)		15 Nos.	10 Nos.
25	Solar Panel	(Polycrystalline 250W)		10 Nos.	5 Nos.
26	Solar Panel	(Monocrystalline 100W)		15 Nos.	10 Nos.
27	Solar Hybrid Inverter	(MPPT 5kVA)		3 Nos.	2 Nos.
28	Inverter	(1500W Sine Wave)		5 Nos.	2 Nos.
29	Charge Controller	(MPPT 20A)		5 Nos.	3 Nos.
30	Charge Controller	(PWM 40A)		5 Nos.	3 Nos.

S. No.	Name of Tools/Equipment	Description	Pictures	CBT	Non-CBT
31	Dry Cell Battery	(12V, 100Ah) for Solar System		5 Nos.	5 Nos.
32	Solar Panel Stand	(For 150W–250W Panels)		15 Nos.	15 Nos.
33	Solar Installation Tester			15 Nos.	5 Nos.
34	Temperature Gun	(Non-Contact IR Infrared)		10 Nos.	5 Nos.
35	Ladder	(Adjustable, 10 Feet)		5 Nos.	2 Nos.
36	High Insulation Rubber Hand Gloves	(Rated 1000V, Class 0)		25 Nos.	25 Nos.

S. No.	Name of Tools/Equipment	Description	Pictures	CBT	Non-CBT
37	Safety Helmet	(ANSI Z89.1 Type I, Class E)		25 Nos.	25 Nos.
38	Safety Shoes	(Insulated, Steel Toe, Rated 1000V)		25 Nos.	25 Nos.
39	First Aid Kit	(Comprehensive)		5 Nos.	3 Nos.
40	Fire Extinguisher	(ABC Type, 5 kg)		5 Nos.	2 Nos.
41	Reflective Safety Vest	(ANSI/ISEA 107 Class 2)		25 Nos.	25 Nos.
42	Lockout/Tagout Kit	(Padlocks, Tags, Hasps)		5 Kits.	3 Kits.

S. No.	Name of Tools/Equipment	Description	Pictures	CBT	Non-CBT
49	Switchgears			25 Nos.	10 Nos.
50	Clamp meter	0–750V–AC 50 Hz		15 Nos.	10 Nos.

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Lab 04: Consumable Materials of Solar PV (Photovoltaic) Technician

(For Class of 15 to 25 Students)

S. No.	Name of Consumable Material	Description	Pictures	CBT	Non-CBT
1	Solar Cable	4 mm ² , 6 mm ²		6 Coils Each	3 Coils Each
2	Connector Bar	1000v and 16 A		25 Nos. each	15 Nos. each
3	Wire	3/0.029"		3 Coils	2 Coils
4	MC4 Connectors	(Male / Female)		2 Coils	2 Coils
5	Cable	3 Core, 7/0.036		2 Coils	2 Coils
6	Electromechanical Relays	(220 V AC) , 8 Pin , With Bases		2 Dozen	1 Dozen

S. No.	Name of Consumable Material	Description	Pictures	CBT	Non-CBT
7	Timer Relays	(220 V AC) , 8 Pin , With Bases		3 Dozen	1 Dozen
9	Three pole MCB	32 A		1 Dozen	1 Dozen
10	Four pole MCB	63 A		1 Dozen	1 Dozen
11	Single Pole MCB	10.0 A		2 Dozen	1 Dozen
12	Double Pole MCB	16 A		2 Dozen	1 Dozen
13	PVC Conduit	Flexible		60 Feet	30 Feet
14	Selector Switches			1 Dozen	1 Dozen
15	Lugs	(0.029, 0.044, 6mm ² , 4 mm ²)		Few Packs of Each	Few Packs of Each

Lab 05: Tools and Equipment of Substation Power House Technician

(For Class of 15 to 25 Students)

S. No	Name of Tools and Equipment	Description	Pictures	CBT	Non- CBT
1	Combination Plier	8 inches, insulated		15 Nos. each	10 nos each
2	Wire Stripper	adjustable gauge, up to 6 mm ²		10 Nos.	5
3	Long Nose pliers	6 inches		12 Nos.	5
4	Insulated Wire Cutter	7 inches		10 Nos.	5
5	Grip Plier	10-inch, curved jaw		15 Nos.	10
6	Knife Cutter	retractable blade		25 Nos.	20
7	Clamp meter	0–750V–AC 50 Hz		10 Nos.	5

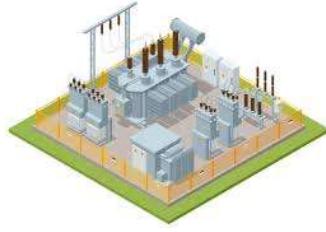
S. No	Name of Tools and Equipment	Description	Pictures	CBT	Non- CBT
8	Multi-Meter	A.C./D.C. (Digital)		10 Nos.	5
9	High Voltage Insulation Tester	(Megger), up to 5kV		5 Nos.	3
10	Earth Resistance Tester	digital, clamp type		5 Nos.	3
11	Primary Injection Test Kit	up to 1000A		3 Nos.	2
12	Secondary Injection Test Kit	for Relays		3 Nos.	1
13	Relay Test Set	3-phase		15 Nos.	5

S. No	Name of Tools and Equipment	Description	Pictures	CBT	Non- CBT
14	SF6 Gas Leakage Detector			3 Nos.	2
15	Contact Resistance Meter	up to 100A		3 Nos. Each	2
16	Breaker Timing Kit			3 Nos.	2
17	Thermal Imaging Camera	IR resolution 160x120		1 Nos.	1
18	Digital Panel Meters	(V/A/Frequency)		5 Nos.	3
19	Drill Machine	(0–13 mm), variable speed		3 Nos.	3

S. No	Name of Tools and Equipment	Description	Pictures	CBT	Non- CBT
20	Allen Key	Universal Set, metric sizes		3 set	2
21	Screw Driver Set	(Phillips & Flat)		3 Each	3 each
22	Hammer	(Ball Pein), 200 gm		10 Nos.	5
23	Bench Vice	5 inch		3 Nos.	3
24	Safety Helmet	ANSI Z89.1, Class E		25 Nos.	15
25	High Voltage Insulated Gloves	Class 2, 17kV with leather protectors		25 Nos.	15
26	Safety Shoes	EH Rated up to 17kV, Steel Toe		25 Nos.	15

S. No	Name of Tools and Equipment	Description	Pictures	CBT	Non- CBT
27	First Aid Kit	Comprehensive		3 Nos.	2
28	CO2 Fire Extinguisher	5kg		2 Nos.	2
29	Reflective Safety Vest	Class 2		25 Nos.	15
30	Lockout/Tagout Kit	with tags, padlocks, hasps		3 Kits.	2
31	Ladder	Ladder		(Adjustable , 10 Feet)	(Adjustable , 10 Feet)
32	High Voltage Detector	(Up To 11 kV – 33 kV)		3 Nos.	2
33	Phase Sequence Meter			5 Nos.	3

S. No	Name of Tools and Equipment	Description	Pictures	CBT	Non- CBT
34	CT & PT Testing Kit			3 Nos.	2
35	HV Test Set	(Portable, 0–5kV or 0–10kV)		3 Nos.	2
36	Infrared Thermometer	(Temperature Gun)		2 Nos.	1
37	Transformer Oil Test Kit			3 Nos.	2
38	Transformer Model	(3-phase oil-type 25kVA for lab use)		1 No.	1
39	HT Panel Demo Setup	(Control, Relay, Metering)		3 Nos.	2

S. No	Name of Tools and Equipment	Description	Pictures	CBT	Non- CBT
40	Single Phase Energy Meter	220V/10–20A		10 Nos.	5
41	Three Phase Energy Meter	(30 A)		10 Nos.	5
42	Distribution Box	with Busbars & Wiring Board		10 Nos.	5
43	Substation Layout Model	(Miniature 11kV Substation with dummy busbars)		1 No	1
44	White Boards	(3x4 Feet) For Practical		1 Nos.	1
45	Power Quality Analyzer			3 Nos.	1
46	Cable Fault Locator			3 Nos.	1

S. No	Name of Tools and Equipment	Description	Pictures	CBT	Non- CBT
47	Busbar Fabrication Tool Kit	(Punch, Bend, Cut)		3 Nos.	1
48	Switchgears			10 Nos.	5

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Lab 05: Consumable Materials of Substation Technician

(For Class of 15 to 25 Students)

S. No.	Name of Item	Description	Pictures	CBT	Non-CBT
1	Control Cable	3 Core, 2.5 mm ² , PVC		3 Bundles	2
2	Cable	Single Core, 10 mm ² , Red/Black		3 Coils Each	2
3	Lugs	(Copper), 2.5 mm ² , 10 mm ² , 25 mm ²		6 Packs Each	3
4	Cable Glands	(PG9, PG11, PG13.5)		6 Packs Each	3
5	Cable Ties	6 inch & 12 inch, UV Resistant		6 Packs Each	3
6	Steel Screw	(0.5 , 1, 1½ , 2 & ¾")		6 Packets each	3
7	Insulation Tape	PVC, Flame Retardant		6 Dozen	3
8	Indicator Lamps	(R, Y, B, Black), 220V		5 Dozen each	3 dozen each

S. No.	Name of Item	Description	Pictures	CBT	Non-CBT
9	Relay Base	(8 Pin), DIN Rail Mountable		3 Dozen	2
10	Electromechanical Relays	(220 V AC) , 8 Pin, With Bases		2 Dozen	2
11	Timer Relays	(220 V AC) , 8 Pin , With Bases		3 Dozen	2
12	PVC Flexible Conduit	20mm & 25mm		10 Dozen	5
13	MCB	(SP 6A, DP 10A, TP 16A , 4 pole 60 A)		1 Dozen Each	1 Dozen Each
14	Voltmeter	Digital (Panel)		2 Dozen	1
15	Ammeter	Digital (Panel)		2 Dozen	1

S. No.	Name of Item	Description	Pictures	CBT	Non-CBT
16	Selector Switch	2-position & 3-position		3 Dozen each	1
17	Emergency Stop Push Button	Twist Release		3 Dozen	1
18	Panel Boxes	Metal Enclosure		5 Nos.	2
19	Slotted Ducts	25x40mm, PVC		12 Lengths	8
20	Earthing Strip	Copper, 25x3mm, 1 meter		3 Sets	2 sets
21	Heat Shrink Tubes	Different Sizes		5 Dozen each	3 dozen

S. No.	Name of Item	Description	Pictures	CBT	Non-CBT
22	Overload Relays			3 Dozen	2
23	Magnetic Contactors	25 A , 220 V AC		3 Dozen	2
24	Busbar Material	(Aluminum/Copper Strips for Demo)		30 Feet	20 ft
25	Push Buttons	Industrial (Red, Green)		3 Dozen Each	2
26	Terminal Blocks	DIN Rail Line Up Mounted, 16mm		100 Pieces	50
27	DIN Rail Strips	35mm (1 Meter Length)		50 Pieces	30

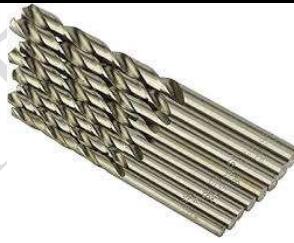
Lab 06: Tools and Equipment of Underground Electrical Wiring Technician

(For Class of 15 to 25 Students)

S. No.	Name of Tools/Equipment	Description	Pictures	CBT	Non-CBT
1	Combination Plier	8 inch, insulated		20 Nos.	10
2	Wire Stripper, adjustable gauge, up to 6 mm²	adjustable gauge, up to 6 mm ²		12 Nos.	5
3	Long Nose pliers, 6 inch	6 inch		10 Nos.	5
4	Insulated Wire Cutter, 7 inch	7 inch		20 Nos.	10
5	Grip Plier, 10-inch, curved jaw	10-inch, curved jaw		10 Nos.	5
6	Knife Cutter, retractable blade	retractable blade		15 Nos.	5
7	Hammers	200 gm		10 Nos.	5
8	Pickaxe	for trenching		5 Nos.	3

S. No.	Name of Tools/Equipment	Description	Pictures	CBT	Non-CBT
9	Shovel/Spade	for trenching		5 Nos.	3
10	Steel Rod Bender	(Manual)		3 Nos.	2
11	Manual Pipe Bender	(for PVC conduit)		3 Nos.	2
12	PVC Pipe Cutter			5 Nos.	3
13	Phillips Screw Driver	No. 1, 2, 3		25 Nos.	15 each
14	Screw Driver	4", 6", 8"		25 Nos.	15 each
15	Measuring Tape	5m		10 Nos.	5
16	Steel Folding Rule			10 Nos.	5
17	Spirit Level			5 Nos.	3

S. No.	Name of Tools/Equipment	Description	Pictures	CBT	Non-CBT
18	Digital Clamp Meter			10 Nos.	5
19	Earth Resistance Tester	(Digital)		5 Nos.	2
20	Multi-Meter A.C./D.C.	(Digital)		10 Nos.	5
21	Megger Tester			3 Nos.	2
22	Cable Route Tracer	(Underground Locator)		5 Nos.	2
23	Underground Cable Fault Locator			5 No.	3

S. No.	Name of Tools/Equipment	Description	Pictures		CBT	Non-CBT
24	Cable Pulling Lubricant Applicator				5 Nos.	3
25	Fish Tape	50m (Steel)			10 Nos.	5
26	Hand Electric Drill Machine	with Hammering 0–13 mm			3 Nos.	2
27	Drill Machine Bits	(1 – 15 mm)			3 Each	2 each
28	Safety gloves	(Class E with Chin Strap)			25 Nos.	15
29	Safety Helmet	(Insulated, EH-rated up to 1000V)	TYPE I (HARD HAT)  TYPE II (SAFETY HELMET) 		25 Nos.	15
30	Reflective Safety Vest	(ANSI/ISEA 107 Class 2)			25 Nos.	15

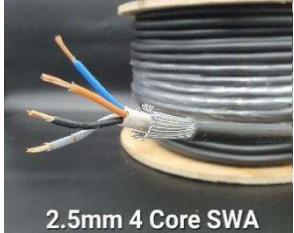
S. No.	Name of Tools/Equipment	Description	Pictures		CBT	Non-CBT
31	High Insulation Rubber Gloves	(Class 0)			3 Nos.	3
32	Lockout/Tagout Kit				2 Nos.	1
33	First Aid Kit				15 Nos.	5
34	Fire Extinguisher	(ABC type, 5kg)			5 Nos.	3
35	Warning Tape	(Buried Cable Marking)			5 Rolls	3
36	Directional Boring Tool				5 Nos.	2

S. No.	Name of Tools/Equipment	Description	Pictures	CBT	Non-CBT
37	Cable Pulling Winch			5 Nos.	1
38	Hydraulic Cable Cutter			5 Nos.	2
39	Crimping Plier			10 Nos.	5
40	Hot Stick			10 Nos.	5
41	Adjustable Wrench			12 Nos.	5
42	Cable Rollers			5 Nos.	3
43	Cable Drum Jacks			1 No.	1 no

S. No.	Name of Tools/Equipment	Description	Pictures	CBT	Non-CBT
44	Cable End Sealing Caps			5 dozen	3 dozen
45	Phase Sequence Indicator			10 Nos.	5
46	Cable Tensioner			1 Nos.	1
47	Switchgears			15	10

Lab 06: Consumable Materials of Underground Electrical Wiring Technician

(For Class of 15 to 25 Students)

S. No.	Name of Items	Distraction	Pictures	CBT	Non-CBT
1	Underground Armored Cable	2.5 mm ² , 4 Core		3 Coils	2 Coils
2	Underground Armored Cable	6 mm ² , 3 Core		5 Coils	3 coils
3	PVC Conduit Pipe	1" & 1.5"		60 Meters Each	30 meters each
4	GI Wire	(for Earthing)		3 Coils	2 coils
5	Earth Rods	(Copper Clad Steel, 8 ft)		5 Nos.	2 Nos
6	Cable Glands	(PG9, PG11, PG13.5)		Few Packs Each	Few Packs Each

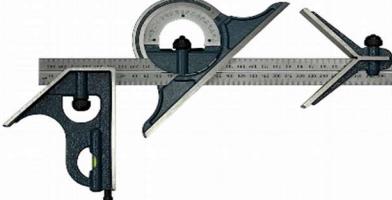
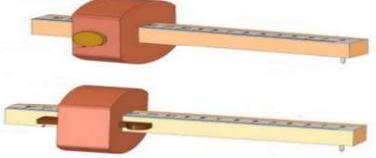
S. No.	Name of Items	Distraction	Pictures		CBT	Non-CBT
7	Heat Shrink Sleeves				5 dozen	2 dozen
8	Cable Jointing Kit	(LV)			3 Nos.	2 nos
9	PVC Tape	(Insulation)			6 dozen	3 dozen
10	Warning Tape (Caution: Buried Cable Below)				6 Rolls	3 Rolls
11	Sand for Cable Bedding	(Practice Use)			As Required	As Required

S. No.	Name of Items	Distraction	Pictures	CBT	Non-CBT
12	Bricks/Stone Slabs	for Cable Protection		As Required	As Required
13	Cable Tags/Markers			5 Packs	3 Packs
14	Lugs	for Underground Cable		Few Packs Each Size	Few Packs Each Size
15	Neutral Link Strip			2 dozen	2 dozen
16	Distribution Box	(Outdoor IP65)		12 Nos.	6 Nos.
17	MCBs	SP 15A, DP 32A TP 32 A, FP 63 A		2 dozen Each	2 dozen Each

S. No.	Name of Items	Distraction	Pictures	CBT	Non-CBT
18	Earth Pit Chamber Cover			5 Nos.	5 Nos.
19	Cable Termination Kit			2 Nos.	2 Nos.
20	Fasteners, Screws, Clamps	(PVC/GI)		Assorted Packs	Assorted Packs

Lab 07: Tools and Equipment of Carpenter

(For Class of 15 to 25 Students)

Sr. No	Tools	Specification	Images	CBT	Non-CBT
1	Tape Measure	Typically, 16–25 ft		10	05
2	Combination Square	Measures 90° and 45° angles; has a built-in ruler		5	2
3	Angle finder	0°–360°, digital or manual		5	2
4	Marking Gauge	Adjustable up to 6–8 inches		5	2
5	C-Clamps	1" to 9" opening sizes		12	6
6	Pipe clamps	For 1/2" or 3/4" diameter pipes		12	4
7	Marking Knife	Sharp blade for precise layout lines		25	10

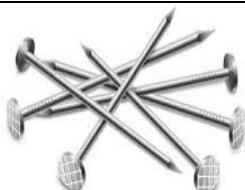
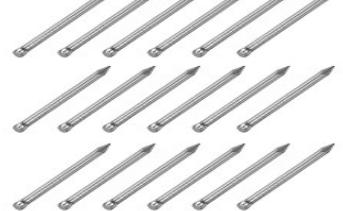
Sr. No	Tools	Specification	Images	CBT	Non-CBT
8	Drill Machine	10mm–13mm chuck, 500W–800W (corded), Variable speed, hammer mode (optional), reverse function		5	2
9	Vernier Calipers	Measures internal/external distances with high precision		5	2
10	Hand Saw	20–26-inch blade; general purpose wood cutting		10	5
11	Back Saw	Short stiff blade; ideal for clean, precise cuts		10	5
12	Baby grinder	4"-to-7"-disc size, 700W–1000W motor, side handle, safety guard		3	1
13	Crosscut Saw	Designed to cut across the grain; teeth angled for slicing		4	2
14	Rip Saw	For cutting along the grain; aggressive tooth pattern		5	2
15	Electric hand planner	3 1/4" blade width, 500W–750, Adjustable depth, dust collection, kickstand		3	1

Sr. No	Tools	Specification	Images	CBT	Non-CBT
16	Wood Chisels	Sizes vary (1/4" to 1"); for carving or joint work		5 Sets	1 Set
17	Wood Rasp	Coarse file; used for shaping wood quickly		5 Sets	1 Set
18	File (Flat/Round)	Used for fine shaping, smoothing		5 Sets	1 Set
19	Router	1/4" or 1/2" collet, 1.25–2.25 HP motor, Variable speed, plunge or fixed base, depth adjustment		2	1
20	Miter Saw	10" or 12" blade size, 1400W–2000W, Sliding arm, laser guide, bevel and miter adjustments		1	1
21	Claw Hammer	16–20 oz; for driving and pulling nails		10	4
22	Wooden/Rubber Mallet	Used with chisels or gentle assembly		5	2
23	Screwdrivers	Flathead, Phillips; for driving screws manually		5 Set	1 Set

Sr. No	Tools	Specification	Images	CBT	Non-CBT
24	Metal hand planner	9"-14" body length, Adjustable mouth, replaceable blades, wooden or plastic handle		5	2
25	Cordless Drill	12–20V; used for drilling and screwdriving		5	1
26	Circular Saw	Blade size ~7 1/4"; for fast straight cuts in wood		2	1
27	Jigsaw	For cutting curves, shapes, and holes		2	1
28	Power Sander	Speeds up sanding; orbital for smooth finish		2	1
29	Spirit Level	Typically, 1 ft; for checking level and plumb surfaces		5	2
30	Drill Bits	1mm–13mm, sets, Twist, spade, auger, Forstner, masonry, brad point		2 Set	1 Set

Lab 07: Consumables Materials of Carpenter

(For Class of 15 to 25 Students)

Sr.	Consumables	Specification	Images	CBT	Non-CBT
1	Wood Screws	1/2"-4", Flat/Phillips head, Steel (zinc or brass coated)		2 box each size	1 box each size
2	Nails	1"-6", Common/Finishing/Brad, Steel, galvanized		1 box each size	1 box each size
3	Wood Glue	250ml-1L bottles		2 bottles	1 bottle
4	Sandpaper	40-320 grit		2 packets	1 packet
5	Wood Filler	250g-1kg tubs, Solvent or water-based		1 gallon	1 gallon
6	Finishing Nails	1"-2.5", Galvanized steel		1 box each size	1 box each size

Sr.	Consumables	Specification	Images	CBT	Non-CBT
7	Abrasive Discs	4"-7" diameter		1 piece each	1 piece each
8	Screws (Drywall)	1"-2.5", bugle head		1 box each size	1 box each size
9	Tack Cloth	9"x18" sheets, Sticky, lint-free		5 meters	2 meters
10	Wire Nails	1"-3", Mild steel		1 box each size	1 box each size
11	Laminate Sheets	Standard 8'x4', Scratch-resistant, heat-resistant		As per need	As per need
12	L Brackets	Small/medium (1"-4"), Steel, zinc-plated, Pre-drilled holes		12 brackets (mix)	6 brackets (mix)
13	Hinges	35mm bore type, Nickel-plated steel,		1 box	1 box

Sr.	Consumables	Specification	Images	CBT	Non-CBT
14	Edge banding tape	18mm–22mm width, 0.4mm–2mm thick, pre-glued or non-glued, iron-on or edge banding machine compatible		2 rolls	1 roll
15	Cylindrical key lock	60mm or 70mm backset, 25mm–30mm faceplate, Brass or stainless steel		8	4
16	Night latch lock (outside opening)	Horizontal type, 60mm–85mm backset, Opened with a key from outside, auto-latching mechanism		4	2
17	Night latch lock (inside opening)	Horizontal, surface-mounted, operated with a thumb turn or knob, used for unlocking from inside		4	2
18	Sandpaper roll China	Grit sizes 40–320		10 ft mix	5 ft mix
19	Ball-bearing sliders	12"–24" length, side-mount type, Full-extension, heavy-duty, soft-close optional		2 packets	1 packet
20	Undermount sliders	12"–22", concealed mounting, Soft-close, push-to-open options, requires rear brackets and clips		2 packets	1 packet

Lab 08: Tools and Equipment of Mason

(For Class of 15 to 25 Students)

S. No	Name of Tool	Specifications	Photo	CBT	Non-CBT
1	Trowel with Handle	Mason Trowel (Tampered and hardened Carbon Steel Blade, Square tip blade 20-28cm long, Wooden handle)		25	10
2	Chisel Set (9" - 12" - 18")	CHISEL Set (High carbon hardens steel, Hexagonal/octagonal shank chisels, chrome/black finish, polished cutting edge. 200 mm shank 20 mm wide on cut (Approximate) 300 mm shank 25 mm wide on cut 450 mm shank 36 mm wide on cut Chisel Set (9"-12"- 18")		5 Sets	2
3	Bricks Hammer with wooden Handle	Brick Hammer (Forged steel rectangle head and tapered tip weight = 250-400gm, Wooden handle (30cm long) with molded vinyl grip)		25	10
4	Hammer (1 Kg, 1½ kg, 3 kg)	Hammer (Forged steel rectangle head and tapered tip weight = 1,1.5,3 Kg Wooden handle (60cm long) with molded vinyl grip)		5 Sets	2
5	Plumb Bob	Plumb Bob (Weight = 100-130gm, Screwed Cap, Strup indicator)		25	10
6	Shovels with Handle	Shovels with handle: Hardened and tempered steel blade, rounded point D-shape handle (wooden) 75cm long		10	5
7	Kassi (plies) with Handle	Kassi (Plies) with handle (Tampered and hardened steel square blade)		5	3
8	Spirit level (Aluminum 2ft)	Spirit Level (Aluminum 2 ft. length)		25	10

S. No	Name of Tool	Specifications	Photo	CBT	Non-CBT
9	Straight edge (Deodar wood) small (4 feet)	Straight Edge: Deodar Wood = thickness Size = 3"x1.5"x48"		25	10
10	Straight edge large (Aluminum)	Straight Edge: Aluminum Tube = 2mm thickness Size = 7 cm x3 cm length = 1 m		5	3
11	Mason Square	24"x12" 4mm thick with marking on both sides		3	2
12	Hand Measuring Tape (5m)	Steel Tape: Slide Lock, Automatic Returns, Metallic / plastic case, 5-meter, Graduation on both side in feet & meter		25	10
13	Measuring Tape 100 feet (30m)	STEEL TAPE • Length 30 m, 13 mm wide • stainless steel with vinyl coating • Both face marking, one in m (0.1, 0.01, and 0.005m) and other in ft		5	3
14	Striker for Vertical joint (pointing)	Striker for vertical joint (pointing): Tampered and hardened steel		25	10
15	Striker for Horizontal joint (pointing)	Striker for horizontal joint (pointing): Tampered and hardened steel		25	10
16	Trowel Pointing	Pointing Trowel x Tampered and hardened Carbon Steel Blade, Square toe blade = 10-18cm long		25	10
17	Pointing Tray	Pointing Tray: Tampered and hardened steel plate with Wooden handle underneath x Size = 400x400 x thickness 3 m		25	10

S. No	Name of Tool	Specifications	Photo	CBT	Non-CBT
18	Wheel barrow	Wheel Barrow: (Capacity: 75-100 Ltr. Size: 130x60x80 cm (approx.) Frame: Angle Iron (1.5 x 1.5 x 0.25 inches) / body M.S sheet (6 SWG) Wheel: Rubber (tubeless tire)		5	3
19	Pick Axe with Wooden handle	Pick Axe: Hardened and tamper steel, Shape: Chisel end point Wight = 4 Kg, Wooden handle= 75 cm long		5	2
20	Steel Float (small, medium, large)	Steel float Set (Small, medium, large) Wooden Handle		10 Sets	5 Sets
21	Wooden Float (small, medium, large)	Wooden Float (small, medium, large) Wooden Handle		10 Sets	5 Sets
22	Steel mould for DPC (6 feet) adjustable for (13½", 9", 4 ½) wall with overall length 6'	M.S. angle iron 1½"x 2"x ¼" welded with 1/2" Steel bar		3 Sets	1 Set
23	Mortar Pans GI (18"Ø)	Mortar Pan (GI Sheet (20 SWG) Size 18" diameter)		25	10
24	Daungry	DANGARI cloth made of Cotton and Polyamide Rexine with Good Quality		25	10

S. No	Name of Tool	Specifications	Photo	CBT	Non-CBT
25	Safty shoes	minimum impact resistance of 200 Joules and compressive strength of at least 15 kN at the toe cap, in addition to other characteristics such as being antistatic.		25	10
26	Mortar / concrete Mixer (one bag)	Concrete Mixer Machine (Drum Types, tilting) 1 Bag mixing capacity		1	1
27	Safety Helmet	Straps should be fitted such that minimum clearance be at least 30 mm and maximum clearance more than 80 mm. Chin strap should have minimum width of 19 mm and directly attached to shell. Nape strip should have minimum depth of 115 mm. The mass of helmet without attachments should be 400 g.		25	10
28	Gloves	Rexine with Good Quality		25	10
29	Safety Belt	Belt Width: up to 2" (51 mm). • Belt Connection: slotted. • Overall Size: 6-3/4" (171 mm) x 10" (254 mm). • Weight (lbs.):		10	5
30	Water Tank	Plastic Water Tank 500 Liters Water storage Capacity		1	1
31	Safety googles	Color: White, lens center thickness of 2.5 mm, weight 26 gr. Per piece in a plastic bag		25 Sets	10 Sets

S. No	Name of Tool	Specifications	Photo	CBT	Non-CBT
32	Dori cotton	Cotton		12	5
33	Tubular Scaffolding	Good quality 1- Steel pipe 1 ½" (10 feet length) 2- Steel pipe 1 ½" (20 feet length), Joint fixed, Joint universal		20	10
34	Laser Level	Laser level with tripod		2	1
35	Water level pipe	Plastic transparent (50 feet)		2	1

Lab 09: Tools and Equipment of Shuttering and Scaffolding

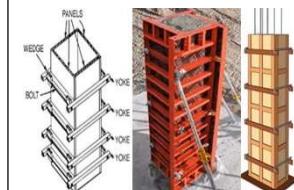
(For Class of 15 to 25 Students)

Sr#	Items	Description	Photos	CBT	Non-CBT
1	Steel Pipe 20ft	Material: Mild steel (ASTM A53/A106) Diameter: 2 inches (50mm) Thickness: 3.2mm (Schedule 40) Surface: Hot-dip galvanized (ISO 1461) Application: Vertical standards for scaffolding.		50	20
2	Screw Jack Base	Adjustable height: 300–500mm. Base plate: 150x150mm, 6mm thickness. Load capacity: 5 tons.		20	10
3	Caster	Load: 100kg, rubber wheel, swivel lock.		20	10
4	Double Couplers	Material: Forged steel (BS 1139). Load capacity: 6.25 kN (swivel), 8.5 kN (fixed).		150	60
5	Swivel coupler	360° rotation for diagonal bracing.		50	20
6	Half Coupler	Single-sided clamp for ledger connections.		50	20
7	Board Retaining Coupler	For securing wooden battens/planks.		10 kg	5 kg
8	Inner Joint Coupler	Connects internal scaffold tubes.		10 kg	5 kg
9	Joint pin Coupler	Pin diameter: 12mm, length: 100mm.		50	25

Sr#	Items	Description	Photos	CBT	Non-CBT
10	Steel plate			200	100
11	Claw Hammer	Weight: 450g, fiberglass handle.		10	5
12	Harness & Lanyard	EN 361-certified, 22kN strength.		25	10
13	Measuring Tape (30 m)	Fiberglass-coated, ±1mm accuracy.		12	6
14	Scaffolder Ratchet	Load: 2 tons, 10m nylon strap.		12	6
15	Nut	Grade 8.8, M12–M20 sizes (ISO 4032).		100 kg	50 kg
16	Standard pipe 6.5 feet length Dia 2 inch	Length: 6.5ft (2m) Use: Horizontal/transom pipes in scaffolding		8	4
17	Ledger pipe 2m length	Diameter: 48.3mm (BS EN 39 standard) Load capacity: ≥10 kN.		8	4
18	Cross bracing length 8.5ft	Diagonal bracing for scaffolding stability. Adjustable length with swivel couplers.		8	4

Sr#	Items	Description	Photos	CBT	Non-CBT
19	Screw Jack Base	Adjustable height: 300–500mm. Base plate: 150x150mm, 6mm thickness. Load capacity: 5 tons.		8	4
20	Wooden ply (1ftx1ft)	12mm thickness, exterior-grade.		8	4
21	Base Plate (Toe Board)	Size: 200x200mm, 8mm steel plate. Anchored with M16 bolts.		2	1
22	Circular saw	Blade: 180mm, 1500W motor.		1	1
23	Drill machine (pedestal type)	Pedestal: 750W, 13mm chuck.		1	1
24	Steel rule	Thickness: 10mm, ASTM A36.		25	10 Sets
25	Hand drill	Hand drill: 550W, 10mm chuck.		6	3 Sets
26	Bit set	HSS bits (3–12mm), masonry/concrete bits.		12 Sets	6 Sets
27	Ball Peen Hammer	Weight: 500g, hardened steel head.		25	10

Sr#	Items	Description	Photos	CBT	Non-CBT
28	Zambur	Chisel edge, 250mm length.		25	10
29	Tabular scaffolding steel pipe 1 1/2-inch 20 feet length	Material: Mild steel (ASTM A53/A106) Diameter: 1.5 inches (37.5mm) Thickness: 3.2mm (Schedule 40) Surface: Hot-dip galvanized (ISO 1461)		1000 ft	500 ft
30	Fixed joints	Adjustable angles (0–180°) for complex scaffolding.		20	10
31	Universal joints	Adjustable angles (0–180°) for complex scaffolding.		10	5
32	Crow bar	Length: 1.2m, forged steel.		12	6
33	Spanner set	Sizes: 10mm–32mm, chrome-vanadium steel.		6 Sets	3 Sets
34	Screw wrench 12"	Adjustable jaw capacity: 1–1.5 inches.		25	10
35	Hammer	Weight: 450g, fiberglass handle.		6	3
36	Electric welding set	MMA/ARC, 230V, 140A output.		4 Sets	1 Set

Sr#	Items	Description	Photos	CBT	Non-CBT
37	Rectangular Column shuttering with different sizes	Material: Steel/plywood. Sizes: Rectangular: 300x300mm to 600x600mm.		5 Sets	2 Sets
38	circular Column shuttering with different sizes	Material: Steel/plywood. Circular: 200mm–800mm diameter.		5 Sets	2 Sets
39	Form work (Plate)	Steel plate thickness: 5mm.		5 Sets	2 Sets
40	PLY WOOD SHEET	Marine-grade, 18mm thickness. Surface: Film-faced for water resistance.		20 Sheets	10 Sheets
41	Wooden Batten	Size: 50x50mm, teak or pine wood.		30	10
42	Wooden Table Saw	2000W motor, 254mm blade.		1	1
43	Plumb bob with dori	300g brass bob, 10m nylon cord.		25	10
44	Core cutting machine	Diamond core bit (100–200mm), 2200W.		1	1

Sr#	Items	Description	Photos	CBT	Non-CBT
45	Pneumatic hammer	Air pressure: 6–7 bar, 2000 BPM.		1	1
46	Pipe level	Shape Round Thickness 1 Millimeter (mm) Length 100 Meter (m) Color Transparent		100 ft	50

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Lab 10: Tools and Equipment of Steel Fixer

(For Class of 15 to 25 Students)

S. No	Item	Specifications	Photo	CBT	Non-CBT
1	Measuring Tape	STEEL TAPE (Length 30 m, 13 mm wide, stainless steel with vinyl coating, both face marking, one in m (0.1, 0.01, and 0.005m) and other in ft (inches & half), first decimeter also marked for 0.001m and first ft marked for 1/8" button arrangement for quick release / winding, non-corrosive metal cover.		10	5
2	Pliers	8" End Cutting Plier wire snips manufactured with special high grade Tool steel, high strength with plastic grip		10	5
3	Hammer	Brick Hammer (Forged steel rectangle head and tapered tip weight = 3000 gm Wooden handle (60cm long) with molded vinylene grip		10	5
4	Tongue (Sunny)	18" Long		10	5
5	Steel Bender Steel Rod (Manual)	1" diameter Galvanized steel pipe with bending Tooth		6	3
6	Electric Rebar Bender	Rebar Bender, 900-watt hydraulic 5/8", bending angle 0-130 degree		1	1
7	Rebar Cutter	Rebar cutter with cutting speed 1-1.5 sec, cutting upto5/8"		1	1

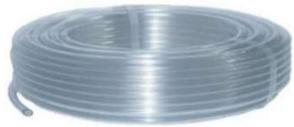
S. No	Item	Specifications	Photo	CBT	Non-CBT
8	Bench Grinder	220 V Bench Grinder for sharpening tools		1	1
9	Pincer	Carpenter Pincer 150mm Size, steel		6	3
10	Anvil	Cast Iron 10 Kg, Single Horn anvil with large counter top and stable base, high hardness, rugged round		5	2
11	Wire Twisting Tool	10" Stainless steel rebar wire twister		12	5
12	Empty Tool Box	U Safe Iron metal Tool Box, Size 17"		1	1
13	Claw Lever (Bari)	2.5' Long 250 mm diameter		10	5
14	Knipex (7",10",12")	3 Piece cobra plier (7",10",12" size)		5 Set	2 Sets
15	Spanner	8 Imperial Set		1 Set	1 Set

S. No	Item	Specifications	Photo	CBT	Non-CBT
16	Hak saw	Hak saw steel cutting with blade size 12"		25	10
17	Hoist and Crane Machine	Voltage:220V-240V~50HzInput power:900WLifting weight:250Kgs (Single line)500Kgs (Double line) Lifting height:18m (Single line), 9m (Double line) Lifting speed:8m/min (Single line),4m/min (Double line) Upper and lower limit device Emergency stop switch Thermal protection terminal Packed by carton box		1	1
18	Rebar Gauge	<ul style="list-style-type: none"> Diameter Range: Rebar gauges are designed to measure a range of standard rebar sizes. Common sizes range from 6 mm (1/4 inch) to 50 mm (2 inches) in diameter. Increment: The gauge typically includes incremental measurements that correspond to standard rebar sizes, such as 6 mm, 8 mm, 10 mm, 12 mm, 16 mm, 20 mm, 25 mm, 32 mm, 40 mm, and 50 mm. 		25	10
19	Rebar Locator	<p>A rebar locator typically detects rebar at depths of 10 mm to 200 mm with an accuracy of ± 1 mm for cover thickness and rebar size. It features an LCD display, user-friendly interface, and options for data storage and connectivity via USB or Bluetooth.</p> <p>Powered by rechargeable batteries, it offers 8-20 hours of operation in a compact, durable design.</p>		1	1
20	Torque Wrench	<p>Thin profile, sealed, teardrop head design offers improved access and durability for highly effective application</p> <p>Torque accuracy of $+\/- 3\%$ CW between 20% and 100% of wrench capability Pull adjustment collar feature allows you to make quick and easy torque setting changes</p>		2	1

S. No	Item	Specifications	Photo	CBT	Non-CBT
21	Rebar Corrosion Detector	ZBL-C310A is a specialized apparatus; it is designed according to the electrochemical testing method (natural potential method) of "construction testing technical standard". By using the electrode polarization theory, C310A tests the potential of concrete surfaces through a Cu/CuSO ₄ reference electrode, and determines the level of rebar corrosion with the commonly used natural potential method. Powerful professional analysis-process software facilitates the generation of test reports automatically. The device generates rebar distribution maps and rebars corrosion potential contour graphs; Data transfer to sub-thumb drive is available, very convenient for field work;		2	1
22	Concrete cover depth meter	1. Detection Depth: Measures concrete cover from 10 mm to 200 mm with ± 1 mm accuracy. 2. Rebar Size Detection: Detects rebar diameters from 6 mm to 50 mm. 3. Display & Interface: Backlit LCD screen with audio/visual alerts for rebar location and depth.		2	1
23	Electric Grinder Small 4"	Hand Held Mini Electric 100 mm angle grinder machine with 6 pieces wheel/disc for cutting, 4", 850 W, 220V		5	2
24	Rebar Tier	Rebar Tier up to 16mmx 19mm with 0.8 mm wire with battery operated		1	1

Lab 11: Tools and Equipment of Tile Fixer

(FOR CLASS OF 15 to 25 Students)

Sr. No	Name of Items	Specifications	Image	CBT	Non-CBT
1	Measuring Tape	METALLIC TAPE • 30 m (100 ft) long • Brass wire woven nylon / cotton, ribbon 2 mm (1/12") wide. • Graduated both in metric and feet units • Complete in plastic case		25	12
2	Trowel	Trowel (200-280 mm long steel) For general purpose • Tempered and hardened steel. • With wooden handle.		25	12
3	Plumb bob	• 100-130 gms weight • Brass polished • Replaceable blued steel pointer • Screw cap with strip indicator		25	10
4	Tile cutter	Max. cutting thickness 12mm STEEL BASE SIZE 815 X 195cm THICKNESS OF BASE 2mm BLADE SIZE Φ - 16 X 6 X 3mm		2	1
5	Rubber Hammer	2.25in (57mm) hard rubber face and 11in (280mm) long wooden handle		25	10
6	Try square	600 x 400mm. Steel Framing Square Heavy gauge steel framing square with metric and imperial markings.		25	10
7	Water Level pipe	Shape Round Thickness 1 Millimeter (mm) Length 100 Meter (m) Color Transparent		5 Pipes	2 Pipes
8	Shovel	Shovels with handle (Hardened and tempered steel blade, rounded point D-shape handle (wooden) 75cm long		10	5

Sr. No	Name of Items	Specifications	Image	CBT	Non-CBT
9	Mortar pan	Mortar Pan (GI Sheet (20 SWG) Size 45 cm dia		10	5
10	Bucket	Heavy duty tin sheet (20 SWG) conical shape with galvanized iron blade 100 feet (30m) x Capacity: 9-10 Ltr.		10	5
11	Wire brush	Wire Brush for clearing		25	10
12	Safety Helmet	Straps should be fitted such that minimum clearance be at least 30 mm and maximum clearance more than 80 mm. Chin strap should have minimum width of 19 mm and directly attached to shell. Nape strip should have minimum depth of 115 mm. The mass of helmet without attachments should be 400 g.		25	10
13	Boot (Safety Shoes)	minimum impact resistance of 200 Joules and compressive strength of at least 15 kN at the toe cap, in addition to other characteristics such as being antistatic.		25	10
14	Mixing board /Tray	Tray (Galvanized Iron, 14 SWG) SET 600X450X80mm, 750X750X80mm (80mm height)		5	3
15	Line and pins	6 inches in length and chrome plated		25	10
16	Spirit level	Mason's Spirit Level x Aluminum = 2 ft. length x Three Vials		25	10

Sr. No	Name of Items	Specifications	Image	CBT	Non-CBT
17	Float	Steel float Set (Small, medium, large) Wooden Handle		25	10
18	Pointer hammer	Ball Point - 800 gms, 1.3 Kg, 42 x 8 x 4 cm		25	10
19	bolster tile remover set	Dimensions, 41.79 x 10 x 4.5 cm; 460 g		25 Sets	10 Sets
20	Straight edge (Aluminum)	Straight Edge Aluminum Tube = 2mm thickness Size = 5x2 cm length = 1 m		10	5 Sets
21	Grinding stone	Particle Size 120 mm Shaft Diameter d 3mm Outer Diameter D 10mm Thickness T 13mm		10	5 Sets
22	Tiling trowel	11" x 4 1/2" blade made with hard tempered steel · Notch shape options: Square, U-Shape, V-Shape		25 Sets	10 Sets
23	Gloves	Good Quality		25 Sets	10 Sets
24	Mallet (Rubber)	MALLET · Hardwood head dia 75 mm · Complete with handle 400 mm long fixed into the head.		25	10
25	Electric mortar mixer	Dimensions (l x w x h) 530 x 390 x 715 mm Speeds (rpm) Low, High Paddle: 140 ± 5, 285 ± 10 Mixing Head: 62 ± 5, 125 ± 10 Rated Power 180 W Bowl Capacity 5 liters approx. Weight 54 kg		1	1
26	Power Wet Saw	1 HP, 3600 RPM direct-drive motor, ideal for handling small or large tile projects · 7 in		2	1

Sr. No	Name of Items	Specifications	Image	CBT	Non-CBT
27	Hand Held tile cutter			5	2
28	Rubber bucket	weight, 1.3 Kilograms; Product dimensions, 31L x 22W x 28H centimeters; Capacity, 14 liters;		5	2
29	Safety Belt	Belt Width: up to 2" (51 mm). • Belt Connection: slotted. • Overall Size: 6-3/4" (171 mm) x 10" (254 mm). • Weight (lbs.): .56		25	10
30	Safety goggles	Color: White, lens center thickness of 2.5 mm, weight 26 gr. Per piece in a plastic bag		25	10
31	Tile leveling plier	Part Number 10 gauge Item Weight 450 weight approximately Product Dimensions 9.5 x 1.8 x 4.25 inches		25	10
32	Reflective jackets	Reflective Jacket made out of Polyester fabric with 1"/2" wide Micro Prismatic reflective tape for night time vision		25	10
33	Diamond Drill bit kit	10-Piece Professional Grade Integrated Steel Diamond Hole Saw - 1/4 in. (6 mm), 5/16 in. (8 mm), 3/8 in. (10 mm), 1/2 in. (12 mm), 9/16 in. (14)		5	2
34	Electric Tile Cutter Machine	Table Size: 395 x 385mm Blade Size: Ø180 x 2.6 x Ø22mm Maximum Cutting Depth: 45°: 25mm Maximum Cutting Depth: 90°: 35mm Input Volt: 220V Rated Input Power: 500W Speed: 2800rpm Weight: 12kg		5	2

Sr. No	Name of Items	Specifications	Image	CBT	Non-CBT
35	Tile Nipper	Material Carbide, Rubber Product Dimensions 8.5" L x 3.5" W Handle Material Rubber Item Weight 0.9 Pounds		5	2
36	Tile and glass circle cutter			5	2
37	Scraper	6-inch Scraper Tool Long Handle Thickened Stainless Steel Material Sturdy and Durable		25	10
38	Heavy Duty knife cutter	155 x 40 x 18 mm (cutter). Blade Dimensions: 0.5 x 18 x 100 mm. Heavy Duty cutter		25	10
39	Silicone gun	9" caulking gun; Thickness : 1.0mm; Length: 230mm; Diameter:55mm; Iron shank with teeth; With cutting function;		25	10
40	Tile Gape regulator	2 x pump up suction cups · 2 x lip clamps · Spans between 170 - 225mm · Width: 250mm · Length: 655mm.		5	2
41	Tile Double vacuum suction cup	Suction cup diameter is 4.7in or 11.8cm. Made of durable Aluminum material, able to handle heavy tiles, Glass, or other smooth material. large 4-3/4 dual suction cup design with locking tabs, great comfortable lifting hands.		5	2
42	Fire Extinguisher	Capacity (kg) 6 Type of Extinguishing Media Dry Powder Exellant Pressurized with N2 Gas/120 gm Gas Cartridge Minimum Effective Discharge (%) 85 Minimum Jet Length (mtr) More than 2 mtr		5	2

Sr. No	Name of Items	Specifications	Image	CBT	Non-CBT
43	Fire prevention kit	Include Fire Alarm Systems; Smoke detector; Heat Detector; Fire Hydrant System; Fire Suppression System		5	2
44	Tile Trimmer	Heavy-duty tile cutter machine in Pakistan for Cutting All Kinds of Ceramic and Porcelain up To 120 cm / 1200m / 48"		5	2
45	knee pad	Capped by large abrasion-resistance rubber caps for long-lasting wear. Excellent for non-slip, hard surface work environment		25 Pair	10 Pair
46	Tile Laser Leveler (Horizontal & Vertical)	3 LASER – DONG CHENG DFF 11; Vertical Line Angle, 150 ; Width of Laser Line, 2 (5m) ; Battery Specification, 3×1.5V AA ; Working Temperature, -10~+45.		2	1
47	Notched Spreader	4" wide spreader used for spreading base adhesive across the back of 6" wide vinyl or rubber cove base. Features a polished stainless-steel blade and an attractive lacquered wood handle. The blade has 1/8" x 1/8" V- shaped notches which are typically the correct size for spreading this adhesive		2	1
48	Grout Spreader	length is 350mm, its width is 150mm and its thickness is 6.5mm.		10	5 Sets
49	Tile Rubbing Stone	rectangular Shape, 4" x 1" Black 60-90 Grit Stone		10	5

Sr. No	Name of Items	Specifications	Image	CBT	Non-CBT
50	Tile Removing Chisel	heavy duty 1-1/2 x 10" tile chisel; Length, 10.0"; Width, 1.5"		10	5
51	Grout Rake	4 in 1 Tile Grout Remover Grout Scraping Rake Tool with 2 Carbide Alloy Head Grout Remover Scraper (0.8mm, 2mm, 3mm, 4mm)		10	5
52	Profile Gauge	Dimension, 5" inches width + 10" inches long; Gross weight, 450 grams; Net weight, 340 grams		10	5
53	Tile Hole Cutter	Metal Cutting Diameter: 25mm / 0.98inch; Shank Size: 8 x 25mm / 0.31inch x 0.98inch (D x L)		10	5
54	Tile Vibrator	Battery Voltage 16.8v max lithium, Battery mAh 2000 mAh, item weight Approx 2kg.		5	2
55	Zapotec six-fold	Zapotec Six-Fold Multi-Function Aluminum Alloy Ruler with Hole Guide - Angle Measurement Finder Hole Opening Locator Template - For Builder Contractor Tiler Carpentry Woodworking (Black)		5	2
56	Monto lit Tile Levelling Lifter	300 mm, wretched lever handle, attach to pump action metal plate form		5 Sets	2 Sets

Lab 12: Plumbing Cum Pipe Fitter Requirement of TVET Lab workshop

(FOR CLASS OF 15 to 25 Students)

Sr.#	Item	Description	Picture	CBT	Non-CBT
1.	Safety Helmet	PPE shell with vents Lining material: Plastic Chin strap included Color as per plumber requirement		25	25
2.	Safety Shoes	with metal guard and rubber sole 41, 42, 43, 44, and 45 sizes in length		25 pairs	12 pairs
3.	Fire Extinguisher	Co2 and AFFF of 10kg		15	10
4.	Fire Blanket	08 FT IN MINIMUM SIZE		10	05
5.	Face Shield	Full face and Fire Resistant		15	10
6.	Rubber Gloves	Thick sole and arm and hand proctor large size		25	25 pairs
7.	Water proof and heat resistant	Shield the Heat proof, weather proof and Electricity arc proof		25	25
8.	Safety Over all	In full size and heat resistant		25	25
9.	Volt Meter cum Apprises meter	Offering Rpm Cum Hour Meter Ampere Volt frequency Fully Digital		15	05

10.	Safety goggles;	Safety goggles Plastic with glass		25	25
11.	Safety Gloves,	Leather Size: Medium Width of Palm: Min 7 cm Length of Palm: Min 18cm		25	5
12.	First Aid Kit; •	Contents List: • 20pcs Alcohol Pads • 9pcs Soap Wipes • 100pcs Wound Plasters • 1 pair of scissors • 4pcs Sterile Gauze Pad (3"x3") • 4pcs Sterile Gauze Pad (4"x4") • 4pcs Sterile Eye Pads • 2pcs Sterile ABD, 1 thermometer • 1pc Burn Dressing, • Ethanol spirit 01 bottle small • Payod in 01 bottle small • Tablets Disprin 2 strip, Panadol 2 strip, brofeen 2 strip, Flegel 2 strip		05	02
13.	Screw Fast	12 V		15	12
14.	Electronic Leak detector with sensing device			05	02
15.	Adjustable wrench:	Set of 5 Pcs Material: High carbon Steel Surface Treatment: Chrome Type: Adjustable set of 5 Pcs 6,8,10,12,15, Inches		10 sets	05 sets
16.	Barricade Tape China Venial Elastic			15	10 Each
17.	Safety Harness Full Body			10	05

18.	Hand Lifter	1 Ton minim weight lifted capacity		2	01
19.	Gas welding plant	Acetylene and oxygen cylinders 20 kg minimum		1	01
20.	Copper, aluminum, and Zinc Electrodes for welding			10 each	4 Each
21.	Hilti Medium Sized	Lasselle Medium in size 1300 watt		5	02
22.	Pipe Bender Machine;	Hydraulic, Max working pressure 44 (mpa), Max. Working movement(mm) 250, curvature radius 4D, Hydraulic Oil N15, Pipe External Diameter Series Min 42x3.25 48X3.5 60X3.		5	03
23.	Chisel; Flat Chisel	(Min set of two) SDS Shank Min 1 inch width x 12- and 8-inch overall length Material: Made from forged high-grade steel		10	06
24.	Marshal trowel;	Size:10"/250mm Diameter of connecting rod:9.5mm		10	05 Nos
25.	Drill Machine Rotary Hammer; Electric Drill Machine	Voltage:220-240V~50/60Hz Input power:650W No-load speed:0-1700rpm Impact rate:0-5500bpm Impact energy:1.7J Max. drilling capacity: Concrete:22mm Steel:10mm Wood:25mm SDS plus chuck system with 3 SDS-PLUS drills		10	05
26.	Ratchet Set;	Die Fix 1/2,3/4,1 and 1x1/4 complete set with lever Set of		10 sets	03 set

27.	Extension board;	four ways extension socket maximum current 13 ampere with 10meter wire		20	15
28.	Angle Grinder	Voltage:220-240V~50/60Hz Input power:710W No-load speed:11000rpm Disc diameter:100mm Spindle thread:M10 With 1pcs auxiliary handle Guard, Auxiliary Handle, Inner (Clamping) Flange, Outer (Round Nut) Flange, Spanner Wrench,		5	03
29.	Grip plier;	Vice Grip Pliers Size: Min 230mm		10	06
30.	Hammer Set;	Iron head with wood handle set of four (250g, 500g, 1000 g and set of 3		5 each	03 Each
31.	Bit; Set	of Min eleven vital pieces Sizes required: 2.5 mm, 3mm, 4mm, 5mm, 6mm, 7mm, 8mm, 9mm, 10mm, 11mm & 12mm Material: High speed steel (HSS) Heat and corrosion resistance		10 sets	05 sets
32.	Hacksaw;	Min 12" heavy duty hacksaw frame with adjustable aluminum handle Blade Length: Min 300mm Material: Steel		25	25
33.	Spirit Level;	Aluminum box frame with milled edges/Plastic end caps 3 solid vials (horizontal, vertical 45 Degree) Length: Min 12"		10	06
34.	L-Key Set;	Set of Min 9 pcs 2,3,4,5,6,7 ,8,9 & 10mm Heat Treated, Tempered Alloy Steel		5 each	03 Each
35.	Richet Socket set	5mm to 32mm steel		10	05
36.	Measuring tape;	Combined measuring and marking edges that quickly and easily measure and mark both external and internal lengths. Tape Length: Min 5 Meter. Tape		25	25

		Width: Min 25mm.			
37.	Pipe wrench set;	Adjustable Chrome Finish Spanner Heat Treated Thumb Screw Movement Precision Marked Scale set of four 8", 10", 12" and 14 " (Set of 4)		5 sets	03 sets
38.	Pipe Cutter;	Can cut copper pipe & aluminum pipe & steel pipe Cutting diameter:10-42mm		15	05
39.	PPRC/GI pipe Cutter	; Length:225mm Cutting diameter:3-42mm Auto-open function		15	10
40.	PPRC Heater	Main Fuse Value 16 A Stainless Steel made Thermostat Regulation: Min 50-300 C Pins hole: Min 3 Capacity: At least 750W to 1000W		15	5
41.	Screw driver set	Material: Chrome vanadium Handle Material: Plastic / Rubber Magnetic Screwdriver Tips Min 6" straight screwdriver Set of 8 Pcs, (4 flat-head and 4 Philips head) size 6", 8" 10" and 12"		5 sets	3 sets
42.	Screw Driver Set;	Set of 2 star and flat metallic head mechanical screw driver 12" long		10	05
43.	Spanner set	Double End opened Spanner Vanadium steel made Chrome plated 12 degree offset bi-hex ring for access Sizes 6x7; 8x9; 10x11; 12x13; 14x15; 16x17; 18x19; 20x22; 21x23; 24x27; 25x28; 30x32		10 sets	5 sets
44.	Water Pressure Leakage Tester Pump;	Main Material: Brass and iron Max. Pressure: 350 psi minimum Hose Thread: Min 1/2" BSP Water Tank Size: 5-liter Handle Length: Min 12"		5	03
45.	Tools box	Size:495x200x290mm 3 layers Steel thickness : 0.6~0.8mm		25	5

46.	Compass;	Spring type Material: Stainless Steel Size: Min 250 mm		10	05
47.	Pipe Insulation Material			20 roles	12 roles
48.	Sealing Tape,	Teflon tape roll		60	30
49.	Bench Vice;	Jaw width min 125mm size Maximum jaw opening min 130mm Jaw depth 70mm Made of cast steel, hardened jaws, gunmetal nut, square thread spindle		10	05
50.	Oil Can;	Fluid Capacity: Min 150 ml Galvanized plate, reinforced hose, hose nozzle min 10 cm			10
51	Center Punch;	Length: 4- & 6-inch Material: Mild steel Point: hardened and tempered Body: Heavy knurled body for easy grip set of 2		15 each	5sets
52	Wire Brush,	Type: Brass wire brush Style: Scourer Shape: Long Length: Min 250mm For all kinds of weld seams Brush Handle Material: Wood Wooden base: Min 15mm thickness		25	25
53.	Pipe Reamer;	Reaming capacity 1/4-inch to 2-inch pipes with 01 nos ratchet spanner key		10	06
54.	Tap Set;	1/8", 1/4", 3/8", 1/2", 3/4", 1" with handle, Master (steel materials)		5 each	02 Each
55.	Air Compressor	Voltage:220-240V~50Hz Input power: 600W (0.8HP) Tank:24L(6.3Gal) Oil free system Noise: 60db Copper wire motor No-load speed:1440rpm Operation pressure:max.8bar		1	1

56.	Tri square set;	Stainless steel, sharp edges, size: 6" and 12" set of 2		10 each	3 each
57.	Pipe Vice;	Holding Pipe Size up to 50mm with Pipe tripod stand. Min tripod stands with standard height" Material pipe vice: of malleable cast iron Jaws: Hardened carbon steel Spindles: Chrome plated		10	06
58.	Cutter plier;	8" High Leverage Diagonal Cutting Pliers Full Body Hardened & Tempered. Insulated grip		10	3
59.	Combination Plier;	8" with insulated grip Material: fully drop forged Carbon steel Surface: cutting edges induction quenched Cutting hardness: less than HRC3		10	3
60.	Pedestal grinder;	Voltage:220-240V~50Hz Input power:150W No-load speed:2950rpm Wheel size:150 mm (6") Heavy Duty Aluminum Base Adjustable work rest Including 1 set eye shield and base for grinder minimum height 36 inch		3	1
61.	File Set;	Length:8"/200mm, T12 Steel Flat steel file 1pcs Half round steel file 1pcs Round steel file 1pcs Triangle steel file 1pcs Square steel file 1pcs		10	5
62.	Vernier Calipers;	Digital Vernier caliper 0-200mm Four-way measurement Metric and inch conversion Measuring is clarity and with accurate Suitable for measuring internal diameter, outside diameter, step and depth with fine adjustment device and depth indicator made of carbon steel		5	3
63.	Socket Set;	24pcs Socket set 1/2" Include : 18pcs 1/2" CRV DR. Sockets: 10,11,12,13,14,15,16,17,18,19,20 ,21,22,23,24 ,27,30,32 2pcs 1/2" DR. Extension bar 1pcs 1/2" DR. Sliding T bar 1pcs 1/2" DR. Universal joint 1pcs 1/2" DR. Speeder handle 1pcs 1/2" DR. Quick ratchet handle Packed by metal box		5	3

64.	Electro Mechanical Machine Threading	TM20 DRKL TOKYO		5	02
65.	HDPE Pipe welding machine	Tokyo 220 v Alloy Mattel		3	02
66.	Pencil Grinder	Falcon Tool Company		10	06
67.	4" Baby Grinder	Falcon Tool Company		10	06
68.	Plumb Bob	Local but Alloy		10	06
69.	Pipe chain age clamp	Edge Lounge Company		05	03
70.	Pipe Filler gauge	China Water resistant 4" dia		10	06
71.	Chain Puller	Mild Steel corrosion proof		10	06
72.	Chain Block	Mild Steel Corrosion proof		01	01
73.	Wire Cutter	INCO Company medium size		15	12
74.	Monkey Plier	6"to 14" in size Inco		25	25
75.	Safety Reflectors	EYE Cacher		25	25

76.	Air Plugs Cum Air Muff	Local China but 85 to 90 DBA		20	10
77.	Hand Hack Saw Steel	Local with Mild Steel		15	12
78.	Bench Grinder	Tittel China		2	02
79.	Rubber Shoes	Honk site Mitter		10 pairs	6 pairs
80.	Hydraulic Crum ping Tool	INCO		04	02
81.	Cross Fit Key	Mild steel with Spray painted		05	02
82.	Hand Drill Machine	With wooden and lean Handle		05	03
83.	Wire Shi elder	2mm to 20 mm wire shielded size jaw		05	03
84.	Drill bit Set	Diamond, Concreate and Steel From 1mm to 20mm minimum in size		5 set each	3 set each

Lab 13: Plumbing cum Solar Water Heating Requirement of TVET Lab workshop

(FOR CLASS OF 15 to 25 Students)

Sr.#	Item	Description	Picture	CBT	Non-CBT
1.	Safety Helmet	PPE shell with vents Lining material: Plastic Chin strap included Color as per plumber requirement		25	25
2.	Safety Shoes	with metal guard and rubber sole 41, 42, 43, 44, and 45 sizes in length		25 pairs	12 pairs
3.	Fire Extinguisher	Co2 and AFFF of 10kg		15	10
4.	Fire Blanket	08 FT IN MINIMUM SIZE		10	05
5.	Face Shield	Full face and Fire Resistant		15	10
6.	Rubber Gloves	Thick sole and arm and hand proctor large size		25	25 pairs
7.	Water proof and heat resistant	Shield the Heat proof, weather proof and Electricity arc proof		25	25
8.	Safety Over all	In full size and heat resistant		25	25
9.	Volt Meter cum Apprises meter	Offering Rpm Cum Hour Meter Ampere Volt frequency Fully Digital		15	05

10.	Safety goggles;	Safety goggles Plastic with glass		25	25
11.	Safety Gloves,	Leather Size: Medium Width of Palm: Min 7 cm Length of Palm: Min 18cm		25	5
12.	First Aid Kit; •	Contents List: • 20pcs Alcohol Pads • 9pcs Soap Wipes • 100pcs Wound Plasters • 1 pair of scissors • 4pcs Sterile Gauze Pad (3"x3") • 4pcs Sterile Gauze Pad (4"x4") • 4pcs Sterile Eye Pads • 2pcs Sterile ABD, 1 thermometer • 1pc Burn Dressing, • Ethanol spirit 01 bottle small • Payod in 01 bottle small • Tablets Disprin 2 strip, Panadol 2 strip, brofeen 2 strip, Flegel 2 strip		05	02
13.	Screw Fast	12 V		15	12
14.	Electronic Leak detector with sensing device			05	02
15.	Adjustable wrench:	Set of 5 Pcs Material: High carbon Steel Surface Treatment: Chrome Type: Adjustable set of 5 Pcs 6,8,10,12,15, Inches		10 sets	05 sets
16.	Barricade Tape China Venial Elastic			15	10 Each

17.	Safety Harness Full Body			10	05
18.	Hand Lifter	1 Ton minim weight lifted capacity		2	01
19.	Gas welding plant	Acetylene and oxygen cylinders 20 kg minimum		1	01
20.	Copper, aluminum, and Zinc Electrodes for welding			10 each	4 Each
21.	Hilti Medium Sized	Lasselle Medium in size 1300 watt		5	02
22.	Pipe Bender Machine;	Hydraulic, Max working pressure 44 (mpa), Max. Working movement(mm) 250, curvature radius 4D, Hydraulic Oil N15, Pipe External Diameter Series Min 42x3.25 48X3.5 60X3.		5	03
23.	Chisel; Flat Chisel	(Min set of two) SDS Shank Min 1 inch width x 12- and 8-inch overall length Material: Made from forged high-grade steel		10	06
24.	Marshal trowel;	Size:10"/250mm Diameter of connecting rod:9.5mm		10	05 Nos
25.	Drill Machine Rotary Hammer; Electric Drill Machine	Voltage:220-240V~50/60Hz Input power:650W No-load speed:0-1700rpm Impact rate:0-5500bpm Impact energy:1.7J Max. drilling capacity: Concrete:22mm Steel:10mm Wood:25mm SDS plus chuck system with 3 SDS-PLUS drills		10	05

26.	Ratchet Set;	Die Fix 1/2,3/4,1 and 1x1/4 complete set with lever Set of		10 sets	03 set
27.	Extension board;	four ways extension socket maximum current 13 ampere with 10meter wire		20	15
28.	Angle Grinder	Voltage:220-240V~50/60Hz Input power:710W No-load speed:11000rpm Disc diameter:100mm Spindle thread:M10 With 1pcs auxiliary handle Guard, Auxiliary Handle, Inner (Clamping) Flange, Outer (Round Nut) Flange, Spanner Wrench,		5	03
29.	Grip plier;	Vice Grip Pliers Size: Min 230mm		10	06
30.	Hammer Set;	Iron head with wood handle set of four (250g, 500g, 1000 g and set of 3		5 each	03 Each
31.	Bit; Set	of Min eleven vital pieces Sizes required: 2.5 mm, 3mm, 4mm, 5mm, 6mm, 7mm, 8mm, 9mm, 10mm, 11mm & 12mm Material: High speed steel (HSS) Heat and corrosion resistance		10 sets	05 sets
32.	Hacksaw;	Min 12" heavy duty hacksaw frame with adjustable aluminum handle Blade Length: Min 300mm Material: Steel		25	25
33.	Spirit Level;	Aluminum box frame with milled edges/Plastic end caps 3 solid vials (horizontal, vertical 45 Degree) Length: Min 12"		10	06
34.	L-Key Set;	Set of Min 9 pcs 2,3,4,5,6,7 ,8,9 & 10mm Heat Treated, Tempered Alloy Steel		5 each	03 Each

35.	Richet Socket set	5mm to 32mm steel		10	05
36.	Measuring tape;	Combined measuring and marking edges that quickly and easily measure and mark both external and internal lengths. Tape Length: Min 5 Meter. Tape Width: Min 25mm.		25	25
37.	Pipe wrench set;	Adjustable Chrome Finish Spanner Heat Treated Thumb Screw Movement Precision Marked Scale set of four 8", 10", 12" and 14 " (Set of 4)		5 sets	03 sets
38.	Pipe Cutter;	Can cut copper pipe & aluminum pipe & steel pipe Cutting diameter:10-42mm		15	05
39.	PPRC/GI pipe Cutter	Length:225mm Cutting diameter:3-42mm Auto-open function		15	10
40.	PPRC Heater	Main Fuse Value 16 A Stainless Steel made Thermostat Regulation: Min 50-300 C Pins hole: Min 3 Capacity: At least 750W to 1000W		15	5
41.	Screw driver set	Material: Chrome vanadium Handle Material: Plastic / Rubber Magnetic Screwdriver Tips Min 6" straight screwdriver Set of 8 Pcs, (4 flat-head and 4 Philips head) size 6", 8" 10" and 12"		5 sets	3 sets
42.	Screw Driver Set;	Set of 2 star and flat metallic head mechanical screw driver 12" long		10	05
43.	Spanner set	Double End opened Spanner Vanadium steel made Chrome plated 12 degree offset bi-hex ring for access Sizes 6x7; 8x9; 10x11; 12x13; 14x15; 16x17; 18x19; 20x22; 21x23; 24x27; 25x28; 30x32		10 sets	5 sets

44.	Water Pressure Leakage Tester Pump;	Main Material: Brass and iron Max. Pressure: 350 psi minimum Hose Thread: Min 1/2" BSP Water Tank Size: 5-liter Handle Length: Min 12"		5	03
45.	Tools box	Size:495x200x290mm 3 layers Steel thickness : 0.6~0.8mm		25	5
46.	Compass;	Spring type Material: Stainless Steel Size: Min 250 mm		10	05
47.	Pipe Insulation Material			20 roles	12 roles
48.	Sealing Tape , Teflon tape roll			60	30
49.	Bench Vice;	Jaw width min 125mm size Maximum jaw opening min 130mm Jaw depth 70mm Made of cast steel, hardened jaws, gunmetal nut, square thread spindle		10	05
50.	Oil Can;	Fluid Capacity: Min 150 ml Galvanized plate, reinforced hose, hose nozzle min 10 cm			10
51.	Center Punch;	Length: 4- & 6-inch Material: Mild steel Point: hardened and tempered Body: Heavy knurled body for easy grip set of 2		15 each	5sets
52.	Wire Brush,	Type: Brass wire brush Style: Scourer Shape: Long Length: Min 250mm For all kinds of weld seams Brush Handle Material: Wood Wooden base: Min 15mm thickness		25	25
53.	Pipe Reamer;	Reaming capacity 1/4-inch to 2-inch pipes with 01 nos ratchet spanner key		10	06

54.	Tap Set;	1/8", 1/4", 3/8", 1/2", 3/4", 1" with handle, Master (steel materials)		5 each	02 Each
55.	Air Compressor	Voltage:220-240V~50Hz Input power: 600W (0.8HP) Tank:24L(6.3Gal) Oil free system Noise: 60db Copper wire motor No-load speed:1440rpm Operation pressure:max.8bar		1	1
56.	Tri square set,	Stainless steel, sharp edges, size: 6" and 12" set of 2		10 each	3 each
57.	Pipe Vice;	Holding Pipe Size up to 50mm with Pipe tripod stand. Min tripod stands with standard height" Material pipe vice: of malleable cast iron Jaws: Hardened carbon steel Spindles: Chrome plated		10	06
58.	Cutter plier;	8" High Leverage Diagonal Cutting Pliers Full Body Hardened & Tempered. Insulated grip		10	3
59.	Combination Plier;	8" with insulated grip Material: fully drop forged Carbon steel Surface: cutting edges induction quenched Cutting hardness: less than HRC3		10	3
60.	Pedestal grinder;	Voltage:220-240V~50Hz Input power:150W No-load speed:2950rpm Wheel size:150 mm (6") Heavy Duty Aluminum Base Adjustable work rest Including 1 set eye shield and base for grinder minimum height 36 inch		3	1
61.	File Set;	Length:8"/200mm, T12 Steel Flat steel file 1pcs Half round steel file 1pcs Round steel file 1pcs Triangle steel file 1pcs Square steel file 1pcs		10	5
62.	Vernier Calipers;	Digital Vernier caliper 0-200mm Four-way measurement Metric and inch conversion Measuring is clarity and with accurate Suitable for		5	3

		measuring internal diameter, outside diameter, step and depth with fine adjustment device and depth indicator made of carbon steel			
63.	Socket Set;	24pcs Socket set 1/2" Include : 18pcs 1/2" CRV DR. Sockets: 10,11,12,13,14,15,16,17,18,19 ,20,21,22,23,24 ,27,30,32 2pcs 1/2" DR. Extension bar 1pcs 1/2" DR. Sliding T bar 1pcs 1/2" DR. Universal joint 1pcs 1/2" DR. Speeder handle 1pcs 1/2" DR. Quick ratchet handle Packed by metal box		5	3
64.	Electro Mechanical Machine Threading	TM20 DRKL TOKYO		5	02
65.	HDPE Pipe welding machine	Tokyo 220 v Alloy Mattel		3	02
66.	Pencil Grinder	Falcon Tool Company		10	06
67.	4" Baby Grinder	Falcon Tool Company		10	06
68.	Plumb Bob	Local but Alloy		10	06
69.	Pipe chain age clamp	Edge Lounge Company		05	03
70.	Pipe Filler gauge	China Water resistant 4" dia		10	06
71.	Chain Puller	Mild Steel corrosion proof		10	06

72.	Chain Block	Mild Steel Corrosion proof		01	01
73.	Wire Cutter	INCO Company medium size		15	12
74.	Monkey Plier	6"to 14" in size Inco		25	25
75.	Safety Reflectors	EYE Cacher		25	25
76.	Air Plugs Cum Air Muff	Local China but 85 to 90 DBA		20	10
77.	Hand Hack Saw Steel	Local with Mild Steel		15	12
78.	Bench Grinder	Tittel China		2	02
79.	Rubber Shoes	Honk site Mitter		10 pairs	6 pairs
80.	Hydraulic Crum ping Tool	INCO		04	02
81.	Cross Fit Key	Mild steel with Spray painted		05	02
82.	Hand Drill Machine	With wooden and lean Handle		05	03
83.	Wire Shi elder	2mm to 20 mm wire shielded size jaw		05	03

84.	Drill bit Set	Diamond, Concreate and Steel From 1mm to 20mm minimum in size		5 set each	3 set each
85.	Water Level Tube	100ft 8mm thickness		04	02

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Lab 14: Tools and Equipment of HVACR

(For Class Of 15 To 25 Students)

S.No	Item	Specification	Image	CBT	Non-CBT
1	Split Air Conditioners	Cooling Capacity 1 ton		6	3
2	Window Air Conditioning Units	Power Input 1500 W, 1.5 ton		5	3
3	Portable Air Conditioning Units	Cooling Capacity 1 ton		3	2
4	Water-cooler	8 liters, Metal body		4	2
5	Condenser Coils	Aluminum		8	5
6	Evaporator Coils	Copper		8	3
7	Expansion Valves	Hand expansion		10	6

S.No	Item	Specification	Image	CBT	Non-CBT
8	Refrigerant Charging Equipment	r-22, r-410, r-134a		10	5
9	Vacuum Pumps	0.30 inch of mercury		8	3
10	Chillers	5-6 ton		2	1
11	Fan Coil Units	Dual fan		3	1
12	Compressors 1/4	Copper winding 1/4 horse power Brand: National		5	3
13	Compressors 1/5	Copper winding 1/5 Horse power Brand: National		3	3
14	Compressors 1/6	Copper winding 1/6horse power Brand: National		3	3
15	Compressors 1/8	Copper winding 1/8 horse power Brand: National		3	3

S.No	Item	Specification	Image	CBT	Non-CBT
16	Refrigerators	6-8 cubic feet Double door		4	2
17	Leak Detection Equipment			4	2
18	Thermometers	Lesar sensor		25	13
19	Temperature and Humidity Meters	Humidity controller hydro		10	6
20	Multimeters	Watt, volt, amp, ohm's		24	15
21	Leak Detectors	Senser torch detection		10	5
22	Vacuum Gauges	High-low pressure		10	4

S.No	Item	Specification	Image	CBT	Non-CBT
23	Electrical Testers	220 Volt		24	17
24	Air Velocity Meters	Air high low velocity		10	06
25	Pipe Benders	1/4, 3/8, 5/8		10	04
26	Soldering Iron	100watt		9	04
27	Refrigerant Recovery Machines	r-22, r-410, r-134		3	1
28	Refrigerant Scales	Up to 30kg		5	4
29	Flaring and Swaging Tools	All nozzle's		15	10
30	Tubing Cutters	Adjustable		20	10

S.No	Item	Specification	Image	CBT	Non-CBT
31	Filling Stations for Refrigerant	Single phase		3	1
32	Insulation Materials	For copper pipes and ducts		25	15
33	Leak Sealing Tools	For 5/8 pipe		12	08
34	Fire Extinguishers	Powder		5	4
35	First Aid Kits	All purpose		3	1
36	Safety glasses	Visible		25	18
37	gloves	All purpose		50	25
38	Emergency Shutoff Valves	Semi sealed		5	3

S.No	Item	Specification	Image	CBT	Non-CBT
39	Cooling Load Calculators	All purpose		10	05
40	Hammers	Matel		10	5
41	Screwdrivers Flathead	6-7"		15	8
42	Screwdrivers Phillips	6-7"		15	8
43	Adjustable Wrench 8"	8"		10	4
44	Adjustable Wrench 10"	10"		10	4
45	Adjustable Wrench 12"	12"		10	4
46	Pipe Wrench 8"	8"		5	2
47	Pipe Wrench 10"	10"		5	2

S.No	Item	Specification	Image	CBT	Non-CBT
48	Torque Wrench	Adjustable		5	2
49	Pliers -Nose	Insulated		5	2
50	Pliers Grip	Insulated		5	2
51	Plier Punch	Insulated		5	2
52	Plier	Insulated		5	4
53	Tape Measure	20-30 feet		8	4
54	Utility Knife	Reuseable		7	03
55	Allen Key set	15 pieces		10	05
56	Hack Saw	Matel		12	06

S.No	Item	Specification	Image	CBT	Non-CBT
57	Pipe Cutters	Adjustable		6	02
58	Level	4 feet		10	06
59	Wire Cutters	Insulated		15	06
60	Pipe Reamer	3/8, 5/8 Diameter		4	2
61	Hole Saw	3 Inches Diameter		4	1
62	File Set	All shapes		8	03
63	Rivet Gun	Heavy duty		3	1
64	Gas welding station	High efficiency		4	01

S.No	Item	Specification	Image	CBT	Non-CBT
65	Drill machine	Hilti		5	02
66	Drill bit set concrete	Concrete		4	2
67	Drill bit set wooden	Wooden		4	2
68	Drill bit set metal	Metal		5	2
69	Spanner set	8-24"		8	03
70	Hack saw blades	All shapes		24	15
71	Bench vise	5 no		10	05
72	Grinder	Medium		5	02
73	Fan motor	3 speeds		25	15

S.No	Item	Specification	Image	CBT	Non-CBT
74	Car air conditioning trainer			3	2

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Lab 15: Tools and Equipment of Advance HVACR

(For Class Of 15 To 25 Students)

S.No	Item	Specification	Image	CBT	Non-CBT
1	Air Handling Unit (AHU)	Contains fans, filters, heating/cooling coils, humidifiers		5	2
2	Chillers	Water-cooled or air-cooled systems that remove heat from water.		7	3
3	Cooling Towers	Works with chillers in central cooling plants.		4	3
4	Boilers	Provides heating by producing steam or hot water.		4	2
5	Variable Refrigerant Flow (VRF/VRV) Systems	Inverter-driven compressor adjusts refrigerant flow based on demand.		7	3
6	Heat Pumps	Air-source or ground-source (geothermal).		6	4
7	Sensors & Smart Thermostats	Measure temperature, humidity, CO2, occupancy, VOCs.		9	5

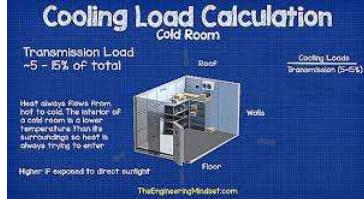
S.No	Item	Specification	Image	CBT	Non-CBT
8	Ductless Mini-Split Systems	Multi-zone capability, inverter-driven compressors.		7	3
9	Hydronic Systems	Use water or steam to heat/cool spaces via radiators or underfloor tubing.		6	4
10	VAV (Variable Air Volume) Systems	Supply air volume varies based on zone needs.		6	4
11	Split Air Conditioners	Cooling Capacity 1 ton		6	3
12	Window Air Conditioning Units	Power Input 1500 W, 1.5 ton		5	3
13	Portable Air Conditioning Units	Cooling Capacity 1 ton		3	2
14	Water-cooler	8 liters, Metal body		4	2
15	Condenser Coils	Aluminum		8	5

S.No	Item	Specification	Image	CBT	Non-CBT
16	Evaporator Coils	Copper		8	3
17	Expansion Valves	Hand expansion		10	6
18	Refrigerant Charging Equipment	r-22, r-410, r-134a		10	5
19	Vacuum Pumps	0.30 inch of mercury		8	3
20	Chillers	5-6 ton		2	1
21	Fan Coil Units	Dual fan		3	1
22	Compressors 1/4	Copper winding 1/4 horse power Brand: National		5	3
23	Compressors 1/5	Copper winding 1/5 Horse power Brand: National		3	3

S.No	Item	Specification	Image	CBT	Non-CBT
24	Compressors 1/6	Copper winding 1/6horse power Brand: National		3	3
25	Compressors 1/8	Copper winding 1/8 horse power Brand: National		3	3
26	Refrigerators	6-8 cubic feet Double door		4	2
27	Leak Detection Equipment			4	2
28	Thermometers	Lesar sensor		25	13
29	Temperature and Humidity Meters	Humidity controller hydro		10	6
30	Multimeters	Watt, volt, amp, ohm's		24	15
31	Leak Detectors	Senser torch detection		10	5

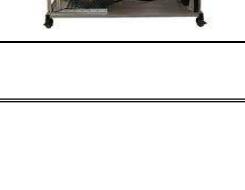
S.No	Item	Specification	Image	CBT	Non-CBT
32	Vacuum Gauges	High-low pressure		10	4
33	Electrical Testers			24	17
34	Air Velocity Meters	Air high low velocity		10	06
35	Pipe Benders	1/4 3/8 5/8		10	04
36	Soldering Iron	100watt		9	04
37	Refrigerant Recovery Machines	r-22, r-410, r-134		3	1
38	Refrigerant Scales	Up to 30kg		5	4
39	Flaring and Swaging Tools	All nozzle's		15	10

S.No	Item	Specification	Image	CBT	Non-CBT
40	Tubing Cutters	Adjustable		20	10
41	Filling Stations for Refrigerant	Single phase		3	1
42	Insulation Materials	For copper pipes and ducts		25	15
43	Leak Sealing Tools	For 5/8 pipe		12	08
44	Fire Extinguishers	Powder		5	4
45	First Aid Kits	All purpose		3	1
46	Safety glasses	Visible		25	15-18
47	gloves	All purpose		50	20-25

S.No	Item	Specification	Image	CBT	Non-CBT
48	Emergency Shutoff Valves	Semi sealed		5	3
49	Cooling Load Calculators	All purpose		10	05
50	Hammers	Matel		10	5
51	Screwdrivers Flathead	6-7"		15	8
52	Screwdrivers Phillips	6-7"		15	8
53	Adjustable Wrench 8"	8"		10	4
54	Adjustable Wrench 10"	10"		10	4
55	Adjustable Wrench 12"	12"		10	4
56	Pipe Wrench 8"	8"		5	2

S.No	Item	Specification	Image	CBT	Non-CBT
57	Pipe Wrench 10"	10"		5	2
58	Torque Wrench	Adjustable		5	2
59	Pliers -Nose	Insulated		5	2
60	Pliers Grip	Insulated		5	2
61	Plier Punch	Insulated		5	2
62	Plier	Insulated		5	4
63	Tape Measure	20-30 feet		8	4
64	Utility Knife	Reuseable		7	03
65	Allen Key set	15 pieces		10	05
66	Hack Saw	Metal		12	06

S.No	Item	Specification	Image	CBT	Non-CBT
67	Pipe Cutters	Adjustable		6	02
68	Level	4 feet		10	06
69	Wire Cutters	Insulated		15	06
70	Pipe Reamer	3/8 5/8		4	2
71	Hole Saw	3"		4	1
72	File Set	All shapes		8	03
73	Rivet Gun	Heavy duty		3	1
74	Gas welding station	High efficiency		4	01

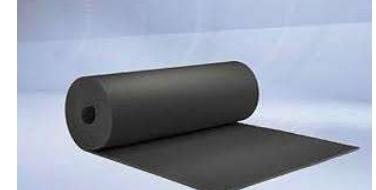
S.No	Item	Specification	Image	CBT	Non-CBT
75	Drill machine	Hilti		5	02
76	Drill bit set concrete	Concrete		4	2
77	Drill bit set wooden	Wooden		4	2
78	Drill bit set metal	Metal		5	2
79	Spanner set	8-24"		8	03
80	Hack saw blades	All shapes		24	15
81	Bench vise	5 nos		10	05
82	Grinder	Medium		5	02
83	Fan motor	3 speeds		25	15
84	Car air conditioning trainer			3	2

Lab 15: Consumable Materials of Advance HVACR

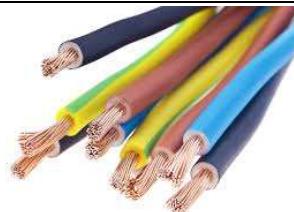
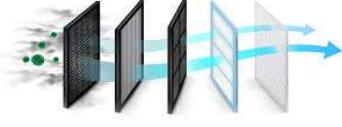
(For Class Of 15 To 25 Students)

S. No	Item	Specification	Image	CBT	Non-CBT
1	Air filters	HEPA, MERV-rated		50	18-20
2	Fan belts	32,36,38,40 size		20-25	10-Dec
3	Glycol/water mixtures			5cans	2cans
4	Water treatment chemicals	biocides, anti-corrosives, scale inhibitors		80liter	50 liter
5	Drift eliminators	within a frame, used to regulate airflow or suppress vibrations		140	80
6	Blowdown valves	boiler water, ensuring efficient and safe boiler operation.		13	6
7	Condensate drain tablets	Pan-Treat condensate tablets		8packs	5 packs
8	Control relays	binary actuator		08-Oct	6

S. No	Item	Specification	Image	CBT	Non-CBT
9	Actuator replacements	electric, pneumatic, or hydraulic		25-30	15-18
10	Dampers	(can degrade over time)			
11	Refrigerant Gas	R-22		3 cylinders	1
12	Refrigerant Gas	R-410		3 cylinders	1
13	Refrigerant Gas	R-134a		3 cylinders	1
14	Refrigerant Gas	R-32		2 cylinders	1
15	Refrigerant Oil	synthetic oil		5 cans	2
16	Vacuum Pump Oil			2 cans	1

S. No	Item	Specification	Image	CBT	Non-CBT
17	Foam Insulation	foam rubber		25 lengths	Dec-15
18	Rubber Insulation	foam rubber		25 lengths	Dec-15
19	Silicone Sealant	flexible sealant		4 tubes	2
20	Coil Cleaner	Ctc		50 bottles	20-25
21	Rubber Gaskets	Rubber		10 meters	4-5 meter
22	Screws 1.5"	Steel		2 box	1box
23	Bolts 1.5"	Steel		2 box	1box
24	Clamps	Steel		24	Dec-15

S. No	Item	Specification	Image	CBT	Non-CBT
25	Copper Fittings Elbows	24guage		24	Dec-15
26	Copper Fittings tees	24guage		24	Dec-15
27	Copper Fittings unions	24guage		24	Dec-15
28	Threaded Rods	Metal		24	Dec-15
29	Soldering Flux	paste		10 box	3-4 box
30	Welding Rods	8 no		3 box	1 box
31	Grinder Discs	5"		24	Dec-15
32	Flaring Tool Inserts			15	08-Oct

S. No	Item	Specification	Image	CBT	Non-CBT
33	Battery Packs	9volts		10	03-Apr
34	Duct Insulation Tape	Pvc foam		12	06-Aug
35	Electrical Wiring and Cable	Mar-29		2 boxes	1 box
36	Air Filters			15	6
37	Cleaning Cloths and Brushes			50	20-25
38	Copper pipe 1/4	24 gauge		2rolls	1 roll
39	Copper pipe 3/8	24 gauge		2rolls	1 roll
40	Copper pipe 5/8	22 gauge		2 rolls	1 roll

S. No	Item	Specification	Image	CBT	Non-CBT
41	Thermostat	Vt 9		12	6
42	Thermostat	Vc 1		12	6
43	Relays mix	1/4 hp		50	20
44	Capacitor	50uf		12	6
45	Capacitor	35uf		12	6
46	Capacitor	Fan 3.5 uf		12	6
47	Overloads	1/4hp		70	30
48	Steel nails	1.5"		8dozen	4dozen
49	Copper rod	Normal gauge		10kg	6kg

S. No	Item	Specification	Image	CBT	Non-CBT
50	Brass rod	Normal gauge		10kg	6kg

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3. Manufacturing Sector

Lab 01: Tools and Equipment of Machinist

(For Class Of 15 To 25 Students)

S.no	Item	Specification	Images	CBT	Non-CBT
1	Vertical Milling Machine	Table size 1000x250 mm, R8 spindle		2	1
2	Milling Vices	6-inch precision vice		4	2
3	Clamping Kit	Standard T-slot clamp kit		2 sets	1 set
4	Parallel strips Sets	Ground steel, 1/8" to 1" height		2 sets	1 set
5	Dividing Head	Manual indexing, suitable for 3-jaw chuck		1	1
6	Lathe Machine	6-8 feet bed length, geared headstock		4	2
7	3-Jaw Chuck	200 mm dia		4	2
8	4-Jaw Independent Chuck	250 mm diameter		2	2

S.no	Item	Specification	Images	CBT	Non-CBT
9	Faceplate	Standard set		1 set	1 set
10	Lathe Dog	Standard set		1 set	1 set
11	Drill Press	Pillar type, up to 25 mm drilling capacity		2	1
12	Drill Vice	5-inch		4	2
13	Surface Grinder	Magnetic chuck 300x150 mm		1	1
14	Shaper Machine	Stroke length 450 mm		1	1
15	Tool Grinder	Double wheel with adjustable rests		1	1
16	Bench Vices	6-inch heavy-duty		10	5

S.no	Item	Specification	Images	CBT	Non-CBT
17	Workbenches	Steel frame with wooden top		5	3
18	Vernier Calipers	0-150mm, 0.01mm resolution, IP54		10	5
19	Micrometers	0-25mm, 25-50mm, 50-75mm, 75-100mm		5 each	3 each
20	Internal Micrometer	0-25mm, 25-50mm, 50-75mm, 75-100mm		5 each	3 each
21	Dial Indicators set	0.01mm resolution, magnetic base		5	3
22	Height Gauges	300mm travel, carbide tip		2	1
23	Thread Pitch Gauges	Metric/imperial		5 sets	3 set
24	Radius Gauges	1-15mm		2 sets	2 set
25	White Board	As required		1	1

Lab 01: Consumable Materials of Machinist

(For Class Of 15 To 25 Students)

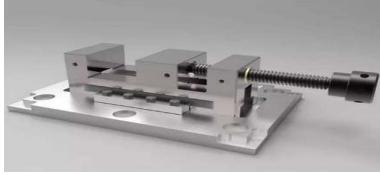
S.no	Tool/Item	Specification	Images	CBT	Non-CBT
1	Lathe Tool Blanks	12x12x100 mm (HSS and Carbide), HRC 55-60		50	20
2	End Mills	6mm, 10mm, 12mm, 16mm (HSS and Carbide), HRC 55-60		5 each	3 each
3	Drill Bits	3mm to 20mm (step of 1mm) (HSS and Carbide), HRC 55-60		2 sets	2 sets
	Centre drills	ø2-ø5mm HSS or Carbide		2 each	2 each
4	Carbide Inserts CNMG	120408 – CVD coated		50	20
5	Carbide Inserts CCMT	060204 – PVD coated (Specs can be changed as per requirements and availability)		20	15
6	Threading Inserts	16ER AG60 (Specs can be changed as per requirements and availability)		20	10

S.no	Tool/Item	Specification	Images	CBT	Non-CBT
7	Taps and dies	M2-M20		10 set each	5 sets each
8	Parting Inserts	MGMN300-M (Specs can be changed as per requirements and availability)		20	10
9	Cutting Oil	General purpose soluble oil		30 Liters	15 liters
10	Grinding Wheels	6-inch and 8-inch		4 each	2 each
11	Clamps and Studs	Standard T-slot set		2 sets	2 sets
12	Emery Cloth	120, 240 grit		20 sheets each	15 sheets each
13	Machine Cleaning Supplies	Brushes, rags, cleaning solvent		20	10
14	Marking Tools	Scriber, punches		5 each	3 each
15	Wooden Blocks	100x100x50 mm		25	15

S.no	Tool/Item	Specification	Images	CBT	Non-CBT
16	Acrylic Sheets	150x100x20 mm		25	15
17	Aluminum Blocks	100x100x50 mm		30	15
18	Mild Steel Blocks	100x100x50 mm		25	15
19	Teflon rods	$\varnothing 20\text{-}\varnothing 50 \times 1000\text{mm}$		20	10
20	Aluminum Stock (6061)	$\varnothing 10\text{-}\varnothing 50\text{mm} \times 500\text{mm}$		30	15

Lab 02: Tools and Equipment of CNC Operator

(For Class Of 15 To 25 Students)

S.no	Item	Specification	Images	CBT	Non-CBT
1	3-Axis CNC Milling Machine	XYZ Travel: 800x600x800 mm, BT40 spindle, 8000 RPM		1	1
2	CNC Lathe Machine	Max Turning Diameter: 300 mm, Max Length: 500 mm		1	1
3	Tool Holders and Collets	BT40/ER32 or ER25 or ER16 collet set		10	5
4	3D Tester or dial probe	4mm probe dia		1	1
5	Cutting Tools Set	End mills, drills, taps – HSS and Carbide		10	5
6	Work Holding Devices	Machine vice, clamps, fixtures, chucks		2	2
7	Clamping Kit	Standard T-slot clamp kit		2 sets	1 set

S.no	Item	Specification	Images	CBT	Non-CBT
8	Surface Plate	600 x 600 mm, Grade 1		1	1
9	Parallel strips Sets	Ground steel, 1/8" to 1" height		2 sets	1 set
10	Vernier Calipers	0-150mm, 0.01mm resolution, IP54		10	5
11	Micrometers	0-25mm, 25-50mm, 50-75mm, 75-100mm		5 each	3
12	Internal Micrometer	0-25mm, 25-50mm, 50-75mm, 75-100mm		5 each	3 each
13	Dial Indicators set	0.01mm resolution, magnetic base		5	2
14	Height Gauges	300mm travel, carbide tip		2	1
15	Thread Pitch Gauges	Metric/imperial		5 sets	3 sets

S.no	Item	Specification	Images	CBT	Non-CBT
16	Radius Gauges	1-15mm	 A photograph of a set of radius gauges, which are precision measuring tools used to measure the radius of concave or convex surfaces. They consist of a central stem with a dial gauge and two adjustable jaws with serrated edges.	2 sets	2 sets
17	White Board	As required	 A photograph of a whiteboard, which is a flat panel used for writing or drawing on with a dry-erase marker or chalk.	1	1

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Lab 02: Consumable Materials of CNC Operator

(For Class Of 15 To 25 Students)

S. No	Item	Specification	Images	CBT	Non-CBT
1	Wooden Blocks	100x100x50 mm		25	15
2	Acrylic Sheets	150x100x20 mm		25	15
3	Aluminum Blocks	100x100x50 mm		30	20
4	Mild Steel Blocks	100x100x50 mm		25	15
5	Teflon rods	ø20-ø50 x1000mm		20	10
6	Aluminum Stock (6061)	ø10-ø50mm x 500mm		30	20
7	Coolant and Lubricants	Water-soluble coolant, 30L can		2	2
8	End mills	ø4-ø30mm (HSS and Carbide), HRC 55-60		30	20

S. No	Item	Specification	Images	CBT	Non-CBT
9	Face mill	ø20-ø80mm (HSS and Carbide), HRC 55-60		10	5
10	Drill bit sets	(HSS and Carbide), HRC 55-60		5 Sets	3 Sets
11	Centre drills	ø2-ø5mm HSS or Carbide		2	2
12	Taps and dies	M2-M20		10	5
13	Ball nose	ø4-ø12mm (HSS and Carbide), HRC 55-60		10	5
14	External Turning Tool Holder	ISO PCLNR 2525 M12 (Specs can be changed as per requirements and availability)		5	3
15	Internal Boring Bar	SCLCR 1010H06 (Specs can be changed as per requirements and availability)		5	3

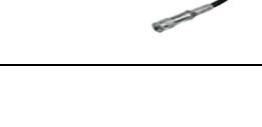
S. No	Item	Specification	Images	CBT	Non-CBT
16	Parting Tool Holder	SER1010E11 (Specs can be changed as per requirements and availability)		5	3
17	Threading Tool Holder	SER1010H11+SNR001 0K11 (Specs can be changed as per requirements and availability)		5	3
18	Inserts (Turning + threading+ boring)	CNMG 120408 – Grade: CVD coated (Specs can be changed as per requirements and availability)		5 boxes each	3 boxes each
19	Safety Gear	Apron, Gloves, goggles, ear plugs, Safety Shoes		25	15
20	Machine Cleaning Supplies	Brushes, rags, cleaning solvent		20	10
21	Marking Tools	Scriber, punches		5	3
22	Emery Cloth	120, 240 grit		20 sheets each	10 sheets each
23	Fire Extinguishers	Class D (for metal fires)		2	2
24	First Aid Kits	ANSI-compliant		2	2

Lab 03: Tools and Equipment of Industrial Mechatronics

(For Class Of 15 To 25 Students)

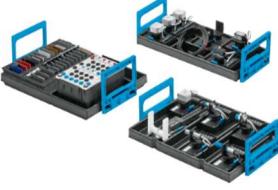
S. No	Name of item	Specification	Images	CBT	Non-CBT
1.	Basic Pneumatic Training Package 101	Festo Training Package		8	1
2.	Basic Principles of Pneumatic and Fundamental Course Book	Teach ware TP 101 Course Book		9	1
3.	Basic Pneumatic Training Book TP 101	Teach ware TP 101 Training Book		1	1
4.	Fluid Sim Pneumatic Software	Fluid Sim 5 Software		1	1
5.	Advanced Pneumatic Training Package 102	Festo TP 102 Training Package		8	1
6.	Advanced Pneumatic Training Book	Teach ware TP 102 Training Book		1	1

S. No	Name of item	Specification	Images	CBT	Non-CBT
7.	Basic Electro-Pneumatic Training Package 201	Teach ware TP 201 Training Package		8	1
8.	Basic Electro-Pneumatic Training Book TP 201	Teach ware TP 201 Training Book		1	1
9.	Advanced Electro-Pneumatic Training Package 202	Festo TP 202 Training Package		8	1
10.	Advanced Electro-Pneumatic Training Book 202	Teach ware TP 202 Training Book		1	1
11.	Edu Trainer S7-1512C-1 PN with Power Supply	Festo Edu Trainer SPS Trainer		8	1
12.	Power Supply Cable	Festo Edu Trainer SPS Cable		8	4
13.	Sy slink Connection Box for PLC to I/P Communication	Festo Edu Trainer Sy slink Trainer		8	1
14.	A/D Simulator Box for signaling to PLC	Festo Simulator A/D Simulator		8	1
15.	I/O Data Cable with Sy slink Connectors	Festo Simulator A/D Simulator		16	4
16.	I/O Data Cable Analog	Festo Simulator A/D Cable		8	2
17.	STEP 7 Trainer Software	Siemens SIMATIC 7 Trainer Trainer		1	1

S. No	Name of item	Specification	Images	CBT	Non-CBT
18.	Pneumatics Sensors Set TP 240	Festo TP 240 Training Package		2	1
19.	Sensors in Pneumatic Training Book TP 240	Teach ware TP 240 Training Book		1	1
20.	Basic Hydraulic Training Package 501	Festo TP 501 Training Package		4	1
21.	Protective Cover for weight, 9kg	Festo Cover Component		4	2
22.	Hose line with quick release coupling	Festo 600 MM NG4		28	5
23.	Hose line with quick release coupling	Festo 1000 MM NG4		12	3
24.	Hose line with quick release coupling	Festo 1.5 meter		16	3
25.	Pressure Relieve Unit	Festo Component		4	1
26.	Pressure Gauge	Festo Component		4	1

S. No	Name of item	Specification	Images	CBT	Non-CBT
27.	Differential Cylinder	Festo Cylinder		4	1
28.	Fundamentals of Hydraulics Course Book	Festo Teach ware Course Book		5	1
29.	Basic Hydraulic Training Book	Festo TP 501 Training Book		1	1
30.	Fluid Sim Hydraulics Software CD	Festo Fluid Sim 5 Hydraulics Software		1	1
31.	Advanced Hydraulics Training Package 502	Festo TP 502 Training Package		4	1
32.	Advanced Hydraulics Training Book	Festo Teach ware Training Book		1	1
33.	Basic Electro-Hydraulic Training Package TP 601	Festo TP 601 Training Package		4	1

S. No	Name of item	Specification	Images	CBT	Non-CBT
34.	4/2 way Solenoid valve spring return	Festo Magnetic valve		4	1
35.	4/3 way Solenoid valve mid position closed	Festo Magnetic valve		4	1
36.	Pressure Switch Electronic	Festo Switch		4	1
37.	Mounting Kit for Cylinders	Festo Component		4	1
38.	Basic Electro-Hydraulic Training Book TP 601	Festo Teach ware Training Book		1	1
39.	Advanced Electro-Hydraulics Training Package 602	Festo TP 602 Training Package		4	1
40.	Advanced Electro-Hydraulics Training Book 602	Festo Teach ware Training Book		1	1

S. No	Name of item	Specification	Images	CBT	Non-CBT
41.	Sensors for object detection	Festo TP 1311 Training Package		2	2
42.	Sensors for object detection Course Book 1311	Festo Teach ware Training Book		1	1
43.	Conveyor Belt Station	Festo MPS 500 Industrial model		1	1
44.	Distribution Station including trolley and Control Panel	Festo MPS 500 Industrial model		1	1
45.	Testing Station including trolley and Control Panel	Festo MPS 500 Industrial model		1	1
46.	Edu Trainer S7-1512 ET 200 SP with Power Supply	Siemens SPS 7 Edu Trainer		2	1
47.	Power Cable	Festo Cable		2	2
48.	Handling Station including trolley and Control Panel	Festo MPS 500 Industrial model		1	1
49.	Sorting Station including trolley and Control Panel	Festo MPS 500 Industrial model		1	1
50.	Processing Station including trolley and Control Panel	Festo MPS 500 Industrial model		1	1
51.	Robot Assembly with Mitsubishi RV-2FB (MPS)	Mitsubishi Electric Mounting Station		1	1
52.	Safety Housing for Robot Assembly (MPS)	Festo MPS 500 Safety Box		1	1
53.	Station Quality Control with Vision	Festo MPS 500 Check Station		1	1
54.	Automatic Warehouse Station AS/RS 20	Festo MPS 500 High Rack Storage Area		1	1

S. No	Name of item	Specification	Images	CBT	Non-CBT
55.	MPS 500 Industrial Package 4.0	Festo MPS 500 Industrial model		1	1
56.	CIROS 6.0 Studio (in combination with Education)	Festo Automation		1	1
57.	Compressor 24-50 230 V	Festo Compressor		1	1
58.	Compressor Accessories	Festo Components		1	1
59.	Simulation Box Digital	Festo Simulator		1	1
60.	Tool Set in Sustainer	Festo MPS 500 Tool Set		1	1
61.	Workpiece Set for Cylinder Assembly	Festo Assembly components		1	1
62.	Mobile Laboratory Workbench	Festo Workbench		4	1
63.	Fixed Drawer Unit for Installation	Festo Drawer		8	2
64.	Wheeled Drawer Unit for Stationary	Festo Drawer		8	2
65.	Oil Receptacle/Protective Mat	Festo Safety Mat		8	2
66.	Hydraulic Power Pack with two constant pumps	Festo Pumps		2	1
67.	Hydraulic Oil	Oil		4	2
68.	Funnel	Equipment		1	1
69.	Hose Clamp (up to 20 Hydraulic Hoses)	Festo Holder		4	2

S. No	Name of item	Specification	Images	CBT	Non-CBT
70.	Cable Clamp (for Laboratory Cables)	Festo Holder		8	4
71.	Power Supply Unit for mounting frame	Festo Supply Unit		8	4
72.	4mm Safety Laboratory Cables	Festo Cables		8	4
73.	Tube Cutter	Cutter		8	2
74.	Dell Laptops for Trainees	Dell Laptops		8	2
75.	External Monitors	Dell Monitors		8	3
76.	Computer Projector HD	Projector		1	1
77.	Laser Printer A4, network version	Cannon Printer		1	1

S. No	Name of item	Specification	Images	CBT	Non-CBT
78.	Wireless LAN Router with Cables	Router		1	1
79.	Digital Multimeter	Multi meter		8	3
80.	Work table for Students	Festo Workbench		10	5
81.	Chair for Students	Chairs		10	5
82.	Trainer Worktable	Festo Workbench		1	1
83.	Trainer Chair	Chair		1	1
84.	Wheeled Drawer Unit for Stationary (Teacher)	Festo Drawer		1	1
85.	Locker for Tech ware & Software	Locker		2	1

S. No	Name of item	Specification	Images	CBT	Non-CBT
86.	Whiteboard approx. 1.5 wide, moveable	Whiteboard		1	1
87.	75" Touch Display, Auflösung: 4K UHD including Mobile Carrier	Interactive Intelligent Panel		1	1
88.	Laptop Charger	Dell Chargers		8	2
89.	Licensing Dongle CIROS & MES	Festo Flash Drive		1	1

Lab 04: Tools and Equipment of Welding

(For Class Of 15 To 25 Students)

S. No	Name of Tools	Items Specification	Images	CBT	Non-CBT
1	Safety Boots	Material: Leather or steel-toe composite, Sole: Slip-resistant rubber, Height: Mid-calf or ankle-length		15-25	5 to 8
2	Welding Helmet	Lens Shade: Variable 9-13, Material: Impact-resistant plastic, Auto-darkening: Yes, with sensitivity adjustment		15-25	5 to 8
3	Welding Gloves	Material: Leather, Kevlar, or aluminized fabric, Lining: Heat-resistant, Length: 12-14 inches		15-25	5 to 8
4	Welding Apron	Material: Leather, fire-retardant fabric, Length: 24-36 inches, Adjustable Straps: Yes		15-25	5 to 8
5	Safety Glasses	Lens Material: Polycarbonate or tempered glass, UV Protection: Yes, ANSI Rating: Z87.1-2003		15-25	5 to 8
6	Welding Uniform	Fabric: 100% cotton, cotton blends, or flame-resistant treated materials like Nomex, Kevlar, or FR cotton		15-25	5 to 8
7	Chipping Hammer	Material: Steel head with wooden or fiberglass handle, Length: 8-12 inches, Type: Single or double-ended		5	2

S. No	Name of Tools	Items Specification	Images	CBT	Non-CBT
8	Welding Magnet	Pull Strength: 50-300 lbs, Material: Neodymium or ceramic, Angle: 45°, 90°, 135° positioning		5 to 10	2
9	Wire Brush	Bristles: Steel, brass, Handle: Wood or plastic, Length: 10-14 inches		5 to 10	2
10	Welding Cart	Material: Steel or HSLA, Capacity: 200-400 lbs, Wheels: Heavy-duty casters		1	1
11	Fire Extinguisher	Type: ABC dry chemical, Capacity: 2.5-10 lbs, Rating: 2A:10B:C or higher		2 to 4	1
12	Welding Cable	Voltage Rating: 600V, Insulation: Rubber, PVC, Gauge: 2 AWG to 1/0 AWG		5 to 10	2
13	Ground Clamp	Material: Copper or Aluminum, Clamp Capacity: 500-1000 Amps, Type: Heavy-duty		15-25	5
14	Cutting Torch	Gas: Oxygen and acetylene, Max Cutting Thickness: 1-6 inches, Nozzle Size: 0.5-3 mm		5	2

S. No	Name of Tools	Items Specification	Images	CBT	Non-CBT
15	Oxygen Tank	Tank Capacity: 40-80 cubic feet, Pressure: 2000-3000 PSI, Material: Steel		2	1
16	Acetylene Tank	Tank Capacity: 40-80 cubic feet, Pressure: 2000-3000 PSI, Material: Steel		2	1
17	Argon Tank	Tank Capacity: 40-80 cubic feet, Material: Steel		2	1
18	Carbon dioxide Tank	Tank Capacity: 40-80 cubic feet, Material: Steel		2	1
19	Flashback arrestors	Body: Brass or stainless steel, Temperature sensor: Polyethylene, End Connections: 1/4 in FNPT, Standard: EN 730/ISO 5175		10	2 to 5
20	Welding Table	Material: Steel or stainless steel, Dimensions: 24"x36" to 48"x72", Weight Capacity: 500-1000 lbs		5 to 10	3
21	C-Clamps	Jaw Capacity: 4-12 inches, Material: Steel or cast iron, Type: Regular or quick-release		5 to 10	2

S. No	Name of Tools	Items Specification	Images	CBT	Non-CBT
22	Welding Curtains	Material: Flame-resistant vinyl or fiberglass, Size: 5'x5' to 10'x10', Color: Red or green		12 sets	2 sets
23	Stick Electrode Holder	Amperage: 75-500 Amps, Material: Copper or steel, Cable Length: 6-12 feet		3 to 5	2
24	Angle Finder	Range: 0°-180°, Material: Steel or plastic, Accuracy: ±0.5°		15-25	5
25	Metal Shears	Cutting Capacity: 14 gauge to 1/4" thick, Blade Type: Straight or curved, Material: High-carbon steel		3 to 5	1
26	Welding Tongs	Material: Steel or cast iron, Length: 12-18 inches, Jaw Capacity: 1-2 inches		3	1
27	Welding Pliers	Length: 8-10 inches, Material: Steel, Jaw Type: Serrated or flat		3	1
28	Welding Machine	Output: 120-600 Amps, Type: MIG, TIG, Stick, Power Supply: 120V, 240V, or multi-voltage		3	1
29	Angle Grinder (Baby)	Power: 4 to 5.5 Amps, Disc Size: 4 to 5 inches, Speed: 5000-7000 RPM		3 to 5	1

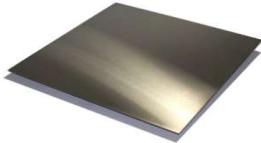
S. No	Name of Tools	Items Specification	Images	CBT	Non-CBT
30	Angle Grinder	Power: 6.5-7.5 Amps, Disc Size: 7 to 9 inches, Speed: 7000-10000 RPM		2	1
31	Hand Cutter	Material: High-carbon steel or forged steel, Cutting Capacity: 1/16" to 1/4" thick metal, Handle: Ergonomic, non-slip grip, Length: 8 to 12 inches		2	1

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Lab 04: Consumables Materials of Welding

(For Class Of 15 To 25 Students)

S. No	Consumables	Items Specification	Images	CBT	Non-CBT
1	Welding Rods (Electrode)	MT-12-6013		40-60 Box	20-30 Box
2	Welding Rods (Electrode)	MT-12-7018		15-25 Box	10 Box
3	Cutting Disc	12"x1/8"x1"		20-30	10
4	Grinder Cutting Disc	7 inches with Groove		20-30	10
5	Baby Grinder Disc	4 inches		40-60	15-20
6	Baby Grinder Cutting Disc	4 inches		40-60	15-20
7	Baby Grinder Cutting Disc	4 inch (1 milli disc)		40-60	15-20

S. No	Consumables	Items Specification	Images	CBT	Non-CBT
8	Jublie Clips	(1/2 inch) and (1 inch)		20	10
9	Oxygen Cylinder	Material: Steel, Capacity: 40 - 80 cubic feet, Pressure: 2000-3000 PSI		5	2
10	Acetylene Cylinder	Material: Steel, Capacity: 40-60 cubic feet, Pressure: 200-250 PSI		5	2
11	Argon Cylinder	Material: Steel, Capacity: 40-80 cubic feet, Pressure: 2000-3000 PSI		5	2
12	Carbon Dioxide Cylinder	Material: Steel, Capacity: 20-50 cubic feet, Pressure: 800-1800 PSI		5	2
13	Steel Plates	Length (6 inch), Width (3 inch) and Thickness (5 mm)		200	80

Lab 05: Tools and Equipment of Advance Welding

(For Class Of 15 To 25 Students)

Sr. No	Tools	Items Specification	Images	CBT	Non-CBT
1	Safety Boots	Material: Leather or steel-toe composite, Sole: Slip-resistant rubber, Height: Mid-calf or ankle-length		15-25	5 to 8
2	Welding Helmet	Lens Shade: Variable 9-13, Material: Impact-resistant plastic, Auto-darkening: Yes, with sensitivity adjustment		15-25	5 to 8
3	Welding Gloves	Material: Leather, Kevlar, or aluminized fabric, Lining: Heat-resistant, Length: 12-14 inches		15-25	5 to 8
4	Welding Apron	Material: Leather, fire-retardant fabric, Length: 24-36 inches, Adjustable Straps: Yes		15-25	5 to 8
5	Safety Glasses	Lens Material: Polycarbonate or tempered glass, UV Protection: Yes, ANSI Rating: Z87.1-2003		15-25	5 to 8
6	Welding Uniform	Fabric: 100% cotton, cotton blends, or flame-resistant treated materials like Nomex, Kevlar, or FR cotton		15-25	5 to 8
7	Chipping Hammer	Material: Steel head with wooden or fiberglass handle, Length: 8-12 inches, Type: Single or double-ended		5	2

Sr. No	Tools	Items Specification	Images	CBT	Non-CBT
8	Welding Magnet	Pull Strength: 50-300 lbs, Material: Neodymium or ceramic, Angle: 45°, 90°, 135° positioning		5 to 10	2
9	Wire Brush	Bristles: Steel, brass, Handle: Wood or plastic, Length: 10-14 inches		5 to 10	2
10	Welding Cart	Material: Steel or HSLA, Capacity: 200-400 lbs, Wheels: Heavy-duty casters		1	1
11	Fire Extinguisher	Type: ABC dry chemical, Capacity: 2.5-10 lbs, Rating: 2A:10B:C or higher		2 to 4	1
12	Welding Cable	Voltage Rating: 600V, Insulation: Rubber, PVC, Gauge: 2 AWG to 1/0 AWG		5 to 10	2
13	Ground Clamp	Material: Copper or Aluminum, Clamp Capacity: 500-1000 Amps, Type: Heavy-duty		15-25	5
14	Cutting Torch	Gas: Oxygen and acetylene, Max Cutting Thickness: 1-6 inches, Nozzle Size: 0.5-3 mm		5	2

Sr. No	Tools	Items Specification	Images	CBT	Non-CBT
15	Oxygen Tank	Tank Capacity: 40-80 cubic feet, Pressure: 2000-3000 PSI, Material: Steel		2	1
16	Acetylene Tank	Tank Capacity: 40-80 cubic feet, Pressure: 2000-3000 PSI, Material: Steel		2	1
17	Argon Tank	Tank Capacity: 40-80 cubic feet, Material: Steel		2	1
18	Carbon dioxide Tank	Tank Capacity: 40-80 cubic feet, Material: Steel		2	1
19	Flashback arrestors	Body: Brass or stainless steel, Temperature sensor: Polyethylene, End Connections: 1/4 in FNPT, Standard: EN 730/ISO 5175		10	2 to 5
20	Welding Table	Material: Steel or stainless steel, Dimensions: 24"x36" to 48"x72", Weight Capacity: 500-1000 lbs		5 to 10	3
21	C-Clamps	Jaw Capacity: 4-12 inches, Material: Steel or cast iron, Type: Regular or quick-release		5 to 10	2

Sr. No	Tools	Items Specification	Images	CBT	Non-CBT
22	Welding Curtains	Material: Flame-resistant vinyl or fiberglass, Size: 5'x5' to 10'x10', Color: Red or green		12 sets	2 sets
23	Stick Electrode Holder	Amperage: 75-500 Amps, Material: Copper or steel, Cable Length: 6-12 feet		3 to 5	2
24	Angle Finder	Range: 0°-180°, Material: Steel or plastic, Accuracy: ±0.5°		15-25	5
25	Metal Shears	Cutting Capacity: 14 gauge to 1/4" thick, Blade Type: Straight or curved, Material: High-carbon steel		3 to 5	1
26	Welding Tongs	Material: Steel or cast iron, Length: 12-18 inches, Jaw Capacity: 1-2 inches		3	1
27	Welding Pliers	Length: 8-10 inches, Material: Steel, Jaw Type: Serrated or flat		3	1
28	Welding Machine	Output: 120-600 Amps, Type: MIG, TIG, Stick, Power Supply: 120V, 240V, or multi-voltage		3	1

Sr. No	Tools	Items Specification	Images	CBT	Non-CBT
29	Angle Grinder (Baby)	Power: 4 to 5.5 Amps, Disc Size: 4 to 5 inches, Speed: 5000-7000 RPM		3 to 5	1
30	Angle Grinder	Power: 6.5-7.5 Amps, Disc Size: 7 to 9 inches, Speed: 7000-10000 RPM		2	1
31	Hand Cutter	Material: High-carbon steel or forged steel, Cutting Capacity: 1/16" to 1/4" thick metal, Handle: Ergonomic, non-slip grip, Length: 8 to 12 inches		2	1
32	TIG Welding Machine	Output Current: 1A to 500A Power Supply: 220V or 380V, 1-phase or 3-phase Frequency: 50-60 Hz Duty Cycle: 60-100% Cooling System: Water-cooled or air-cooled torches		2 to 5	1
33	MIG Welding Machine	Voltage Range: 18V to 30V Wire Feed Speed: 2-12 m/min Power Supply: 220V or 380V, 1-phase or 3-phase Amperage Range: 30A to 500A Duty Cycle: 60% at 500A		2 to 5	1
34	Spot Welder	Power Supply: 220V or 380V, 1-phase or 3-phase Welding Current: 500A to 50kA Electrode Pressure: Adjustable pneumatic or hydraulic Weld Time: 0.1 - 2 seconds		2 to 5	1
35	Plasma Cutter	Power Supply: 220V - 480V, 1-phase or 3-phase Cutting Thickness: 1-30 mm Cutting Speed: 2000-10000 mm/min Precision: ± 0.5 mm Material Compatibility: Steel, Aluminum, stainless steel		2	1

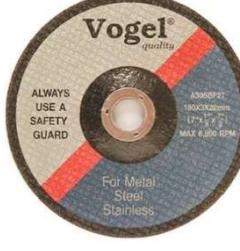
Sr. No	Tools	Items Specification	Images	CBT	Non-CBT
36	Heat Treatment Furnace	Temperature Range: 200°C to 1200°C Heating Method: Electric or gas-fired Chamber Size: 100L to 2000L Cooling Rate: 1°C/min to 30°C/min (adjustable)		2	1
37	Weld Test Equipment	Technology: Ultrasonic, visual, and X-ray inspection Accuracy: ±0.1 mm Software: AI defect analysis and reporting Material Compatibility: Steel, Aluminum, stainless steel		1 Each	1
38	Welding Jig and Fixture	Material: Steel, Aluminum, or heavy-duty alloys Accuracy: ±0.2 mm Design: Customizable for specific parts Clamping Method: Pneumatic, hydraulic, or mechanical clamps Adjustment: Manual or automated adjustment features for positioning Max Load: 100-1000 kg depending on design		5 to 10	2
39	Flux Core Arc Welding (FCAW) Machine	Power supply ranging from 220V to 480V, either 1-phase or 3-phase, and supports a wide range of wire diameters from 0.8 mm to 2.4 mm, depending on the material and application		3 to 5	1
40	Automated Welding Torch	Power Output: 100A to 600A Torch Type: MIG, TIG, or Stick Cooling System: Air-cooled or water-cooled Control: Automated height control, automatic gas flow adjustment		3 to 5	1
41	Automated Metal Cutting System	Cutting Speed: 2000-15000 mm/min Cutting Method: Plasma, laser, or abrasive water jet Power Supply: 220V or 480V, 3-phase Material Compatibility: Steel, stainless steel, Aluminum		2	1

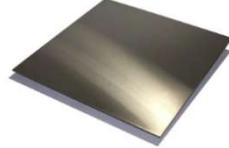
Sr. No	Tools	Items Specification	Images	CBT	Non-CBT
42	Welding Slag Removal System	Technology: Mechanical scraping or air blow Speed: 1000-5000 mm/min Material Compatibility: Steel, stainless steel Power Supply: Pneumatic or electric-powered		2	1

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Lab 05: Consumables Materials of Advance Welding

(For Class Of 15 To 25 Students)

Sr. No	Consumables	Items Specification	Images	CBT	Non-CBT
1	Welding Rods (Electrode)	MT-12-6013		40-60 Box	20-30 Box
2	Welding Rods (Electrode)	MT-12-7018		15-25 Box	10 Box
3	Cutting Disc	12"x1/8"x1"		20-30	10
4	Grinder Cutting Disc	7 inches with Groove		20-30	10
5	Baby Grinder Disc	4 inches		40-60	15-20
6	Baby Grinder Cutting Disc	4 inches		40-60	15-20

Sr. No	Consumables	Items Specification	Images	CBT	Non-CBT
7	Baby Grinder Cutting Disc	4 inch (1 milli disc)		40-60	15-20
8	Jubilee Clips	(1/2 inch) and (1 inch)		20	10
9	Oxygen Cylinder	Material: Steel, Capacity: 40 - 80 cubic feet, Pressure: 2000-3000 PSI		5	2
10	Acetylene Cylinder	Material: Steel, Capacity: 40-60 cubic feet, Pressure: 200-250 PSI		5	2
11	Argon Cylinder	Material: Steel, Capacity: 40-80 cubic feet, Pressure: 2000-3000 PSI		5	2
12	Carbon Dioxide Cylinder	Material: Steel, Capacity: 20-50 cubic feet, Pressure: 800-1800 PSI		5	2
13	Steel Plates	Length (6 inch), Width (3 inch) and Thickness (5 mm)		200	80

Sr. No	Consumables	Items Specification	Images	CBT	Non-CBT
14	MIG Welding Wire	Types: Solid wire Material: Mild steel, stainless steel, Aluminum, copper alloys Diameter: 0.8mm to 2.4mm Coating: Non-coated or with copper coating		15-25 Coils	5-10 Coils
15	TIG Filler Rods	Types: Tungsten inert gas welding filler rods Material: Stainless steel, Aluminum, titanium, nickel alloys Diameter: 0.8mm to 3.2mm Packaging: Sticks or coils		15-25 Packs	5-10 Packs
16	Flux-Cored Welding Wire	Types: Gas nozzles for MIG, TIG, and plasma cutting Material: Copper, ceramic, or brass Size: Varies depending on torch model		7-10 Coils	3-5 Coils
17	Tungsten Electrodes	Types: Pure tungsten, Thoriated tungsten, Carinated tungsten Diameter: 0.4mm to 6.4mm		7-10 Packs	2-3 Packs
18	Welding Nozzles	Types: Gas nozzles for MIG, TIG, and plasma cutting Material: Copper, ceramic, or brass Size: Varies depending on torch model		50-75 Nozzles	15-25 Nozzles
19	Welding Backing Bars	Material: Stainless steel or Aluminum Application: Used to support welds for out-of-position welding, prevents distortion		10 to 15	5 to 7
20	Welding Copper Back-Up Strips	Material: Copper or copper alloy		7 to 10	5 to 7

Sr. No	Consumables	Items Specification	Images	CBT	Non-CBT
21	Welding Shields and Covers	Types: Protective covers for shielding during arc welding Material: Stainless steel, Aluminum, heat-resistant materials Size: Custom or standard sizes based on job requirements		5	2
22	MIG Gun Contact Tips	Material: Copper or brass Size: 0.8mm to 1.6mm		15-25	7 to 12
23	Fume Extractor	Type: Portable or fixed systems Filtration: HEPA or activated carbon filters Airflow Rate: 1000-5000 CFM (depending on system)		3 to 5	2
24	TIG Welding Tungsten Sharpening Tool	Material: Tungsten grinding tool Application: For sharpening tungsten electrodes for TIG welding Features: Precise sharpening to maintain a clean arc		1	1
25	Welding Positioners	Material: Steel Capacity: 500 kg to 5000 kg		15-25	7 to 12
26	Welding Preheat Torch	Material: Steel, brass nozzle Fuel Type: Propane, acetylene Temperature Range: 400°C to 900°C		2	1

Lab 06: Tools and Equipment of Blacksmith/Foundry

(For Class Of 15 To 25 Students)

S. No	Tools	Item Specification	Images	CBT	Non-CBT
1	Safety Boots	Material: Leather or steel-toe composite, Sole: Slip-resistant rubber, Height: Mid-calf or ankle-length		15-25	5-8.
2	Face Shields	Material: Impact-resistant plastic		15-25	5-8.
3	Gloves	Material: Leather, Kevlar, or aluminized fabric, Lining: Heat-resistant, Length: 12-14 inches		15-25	5-8.
4	Apron	Material: Leather, fire-retardant fabric, Length: 24-36 inches, Adjustable Straps: Yes		15-25	5-8.
5	Safety Glasses	Lens Material: Polycarbonate or tempered glass, UV Protection: Yes, ANSI Rating: Z87.1-2003		15-25	5-8.
6	Uniform	Fabric: 100% cotton, cotton blends, or flame-resistant treated materials like Nomex, Kevlar, or FR cotton		15-25	5-8.
7	Forge	Type: Coal, gas, or electric forge Material: Steel or cast iron Temperature Range: Up to 1500°C (2700°F) Fuel Type: Coal, propane, or natural gas		5	2

S. No	Tools	Item Specification	Images	CBT	Non-CBT
8	Anvil	Material: Steel with a hardened face Weight: 50 kg to 200 kg (depending on use) Size: 200 mm to 600 mm face width		5	2
9	Hammer	Types: Claw hammer, cross-peen hammer, rounding hammer Material: Steel with a wooden or fiberglass handle Weight: 0.5 kg to 2 kg		3 Sets	1 Set
10	Tongs	Material: Steel Type: Various designs for gripping hot metal (flat, round, square) Length: 500 mm to 900 mm		4	1
11	Chisels	Material: High-carbon steel or tool steel Sizes: 6 mm to 50 mm Type: Pointed, flat, or hot-cut chisels		4	1
12	Pry Bar	Material: Steel Length: 400 mm to 900 mm Application: Used for lifting or separating hot metal pieces		2	1
13	Swage Block	Material: Steel or cast iron Size: 300 mm to 600 mm Shape: Multi-functional with various shaped cavities for shaping metal		10	3
14	Tapping Tool	Material: Steel Application: Used for threading or tapping holes in metal		3	1
15	Wire Brush	Material: Steel or brass bristles Handle: Wooden or plastic Size: 200 mm to 300 mm length Application: For cleaning metal surfaces		8-10.	02-May

S. No	Tools	Item Specification	Images	CBT	Non-CBT
16	Blacksmithing Clamps	Material: Steel Size: 300 mm to 600 mm Type: Spring, C-clamps, or locking clamps for holding metal in place during work		8-10.	3-5 n
17	Tapering Tool	Material: Steel Size: 20 mm to 100 mm diameter Application: For creating tapered ends in metal bars or rods		3-5.	1
18	Heat Treatment Oven	Temperature Range: Up to 1000°C Material: Steel with refractory linings Purpose: Used for hardening, tempering, or annealing metal		1	1
19	Casting Flask	Material: Steel, iron, or cast iron Size: Varies depending on casting size Application: Container used in sand casting to hold the mold		3-5n	2
20	Rammer (Mold Rammer)	Material: Steel or wood Weight: 2 kg to 5 kg Application: Used to compact sand or other materials in mold making		3	1
21	Sprue Bushing	Material: Steel or cast iron Size: Typically, 50 mm to 150 mm Application: Used to channel molten metal from the pouring basin into the mold cavity		3	1
22	Mold Making Tools	Types: Rammers, trowels, sprue pins, and mold boards Material: Steel, wood, or Aluminum Application: For preparing molds for metal casting		7-10n	3-5.

S. No	Tools	Item Specification	Images	CBT	Non-CBT
23	Brazing Torch	Material: Steel Fuel Type: Propane or acetylene Application: Used for heating and brazing metals		3-5n	2
24	Grinding Wheel	Material: Abrasive material like Aluminum oxide or silicon carbide Size: 150 mm to 300 mm diameter Speed: Typically, 3000 RPM or higher Application: For grinding or finishing metal pieces		2	1
25	Sand Blaster	Material: Steel Size: Portable or stationary versions Application: For cleaning metal surfaces by abrasive blasting		1	1
26	Casting Pattern	Material: Wood, metal, or plastic Application: Used to form the mold cavity for casting metal shapes		15-25	5-10n
27	Chill Plate	Material: Steel or cast iron Size: Custom sizes Application: Used to control cooling rates of molten metal during casting		2	1
28	Foundry Sand Mixer	Material: Steel Capacity: 50 kg to 500 kg Application: Used for mixing sand and binder for mold-making in casting		1	1
29	Foundry Moulding Box	Material: Steel or wood Size: Varies based on mold dimensions Application: Holds the sand or other materials to form the mold during casting		6-10n	2-5n

Lab 06: Consumables Materials of Blacksmith/Foundry

(For Class Of 15 To 25 Students)

S. No	Consumables	Items Specification	Images	CBT	Non-CBT
1	Cutting Disc	12"x1/8"x1"		15-30	10 to 12
2	Grinder Cutting Disc	7 inches with Groove		15-30	10 to 12
3	Baby Grinder Disc	4 inches		40-60	15-20
4	Baby Grinder Cutting Disc	4 inches		40-60	15-20
5	Baby Grinder Cutting Disc	4 inch (1 milli disc)		40-60	15-20
6	Oxygen Cylinder	Material: Steel, Capacity: 40 - 80 cubic feet, Pressure: 2000-3000 PSI		3 to 5	2

S. No	Consumables	Items Specification	Images	CBT	Non-CBT
7	Acetylene Cylinder	Material: Steel, Capacity: 40-60 cubic feet, Pressure: 200-250 PSI		3 to 5	2
8	Coal (for Forge)	Type: Bituminous coal or anthracite Size: Small lumps or powdered Usage: Fuel for traditional coal forges in blacksmithing		80-120kg per day	30-70kg per day
9	Flux	Material: Borax, sodium carbonate, or other chemicals Usage: Used to prevent oxidation, reduce impurities, and help with the welding process		0.5 kg per month	0.5 kg per month
10	Foundry Binder	Type: Clay, sodium silicate, or bentonite clay Usage: Mixed with sand to bind it for moulding purposes in casting		10kg per month	5 kg per month
11	Welding Rods	Material: Mild steel, stainless steel, or specialized alloy Size: 2 mm to 6 mm diameter Usage: For welding metal parts together, often used in blacksmithing for repairs		20-30 Box	10-15 Box
12	Casting Wax	Material: Paraffin or beeswax-based Usage: Used for creating patterns in investment casting		50-80 kg per month	20-45 kg per month
13	Molten Metal Additives	Types: Silicon, magnesium, carbon, and others Usage: Added to molten metal to improve its properties like strength, hardness, and machinability		30-70 kg per month	10-20kg per month

S. No	Consumables	Items Specification	Images	CBT	Non-CBT
14	Mold Release Agent	Material: Oil-based or water-based Usage: Coats mold surfaces to prevent the mold from sticking to the metal during casting		1 liter per month	0.5 liter per month
15	Graphite Powder	Material: Natural graphite Usage: Used as a lubricant for mold release, and to reduce friction during metal casting		1.5kg per month	0.5-1kg per month
16	Heat Treatment Salt	Material: Sodium nitrate or sodium chloride Usage: Used for heat treatment processes, like hardening or tempering metals		5 kg per month	1-2 kg per month
17	Sandblasting Abrasive	Material: Silica sand, glass beads, or Aluminum oxide Usage: Used for cleaning or finishing metal parts, often prior to welding or painting		5-10kg per month	2-3kg per month
18	Polishing Compound	Type: Abrasive paste or powder Usage: Used to smooth and finish the surface of metal parts after forging or casting		1kg per month	0.5 kg per month
19	Metal Dross Remover	Material: Chemical agents or flux. Usage: Removes impurities or slag (dross) from the surface of molten metal during casting or forging		3-5 kg per month	2 kg per month
20	Refractory Materials	Material: Alumina, silica, zirconia Usage: Used to line furnaces, kilns, or for casting molds to withstand high temperatures without melting		30 kg for Six Months	10 kg for Six Months
21	Iron/Steel Scrap	Material: Recycled iron or steel Size: Varies Usage: Used for melting and casting new metal parts or for repairs in blacksmithing		30-50 kg per month	10-20 kg per month

S. No	Consumables	Items Specification	Images	CBT	Non-CBT
22	Cement for Core Making	Material: Sodium silicate or other binders Usage: Used to bind sand particles together for making cores that form internal cavities in metal castings		3-10kg per month	2-3 kg per month
23	Casting Gating System	Material: Sand or metal gating systems Usage: Directs molten metal from the pouring basin into the mold cavity in metal casting processes		20-30 kg per month	10-15 kg per month
24	Casting Sand	Material: Silica sand, clay, or other minerals Application: Used in the mold-making process for creating molds for metal casting		250kg per Student	100kg per Student

4. Textile Sector

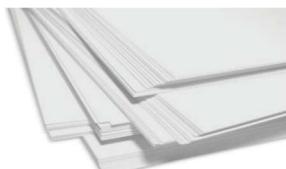
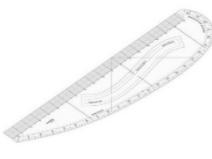
Lab 01: Tools and Equipment of Fashion Designing

(For Class Of 15 To 25 Students)

S. No	Tool Name	Specification	Image	CBT	Non-CBT
1	Measuring Tape	Prym, Dritz, Birch 60 inches, flexible fiberglass		26	15
2	Tailor's Chalk	Local Market Multi-color, triangular		50	20
3	Fabric Scissors	Fiskars, Kai, Gingher 8 inches, stainless steel		26	15
4	Thread Clipper	Raza, Kohinoor, Singer PK Small, spring action		26	15
5	Tracing Wheel	Clover, Dritz hand-held tool with a spiked rotating wheel		26	15
6	Bobbins	Singer, Brother Plastic or metal, machine-compatible		26	15
7	Bobbin Case	Singer, Brother Plastic or metal, machine-compatible		26	15
8	Hand Sewing Needles	John James, Pony, Clover Universal #14/90		25	15

S. No	Tool Name	Specification	Image	CBT	Non-CBT
9	Seam Ripper	Clover, Dritz Ergonomic handle, sharp blade		26	15
10	Steam Iron	Sewing, Philips, Rowenta, Panasonic Steam iron with temperature control		04	02
11	Ironing Board	Local Market flat board wooden		04	01
12	Rulers (Straight, L-square)	Local Market 18" straight, 24" L-scale		26	15
13	Draping Pins	Local Market Ball-head pins		26	15
14	Draping Tape	Local Market Narrow 1/4" twill tape		200 yards	100 Yards 15
15	Twill Tape	Local Market Cotton/poly blend, pre-shrunk		300 Yards	100 Yards
16	Pin cushions	Dritz, Prym pin Holder		26	15

S. No	Tool Name	Specification	Image	CBT	Non-CBT
17	Fabric Marker Pen	Local Market Washable, air erasable ink		26	15
18	Draping Mannequin	Local Market Size 42 Adjustable size, padded		05	03
19	Display Mannequin	Local Market size 42 mannequin		05	03
20	Display Rack	Amazon Basics Metal rack with rod		03	02
21	Hangers	Amazon Basics Metal rod		200	100
22	Packing Bags	Local Market Plastic (PVC, LDPE) – transparent, waterproof		500	100
23	Pattern Notcher	Dritz, Sew Easy Metal, notch cutting edge		26	10

S. No	Tool Name	Specification	Image	CBT	Non-CBT
24	Pattern Puncher	Local Market Metal, Paper Hole maker		26	10
25	Pattern Paper	Local Market Wide roll for pattern making		2 Rim	1 Rim
26	Industrial Steam Iron	Local Market Heavy-duty, high steam output		02	02
27	Loop Turner	Local Market Steel rod with hook		26	15
28	Tailor's Ham	Local Market For pressing curved seams		04	03
29	Sleeve Board	Local Market Mini ironing board for sleeves		02	02
30	Rotary Cutter	Local Market 45mm blade, ergonomic		26	15
31	Pattern Master Ruler	Local Market Multi-function drafting ruler		26	15

S. No	Tool Name	Specification	Image	CBT	Non-CBT
32	Pinking Shears	Local Market Zigzag edge blade		26	15
33	Fabric Weights	Local Market Metal weights, assorted shapes		26	15
34	Garment Steamer	Jiffy, Rowenta Portable, for vertical steaming		02	01
35	Buttonhole Cutter	Local Market Sharp, small chisel tip		26	15
36	Bodkin	Local Market Blunt needle-like tool		05	02
37	Bias Tape Maker	Local Market For folding bias tape		26	15
38	Awl	Local Market Sharp point, wood/plastic handle		26	15
39	Fabric Shears	Local Market 8–10-inch, heavy-duty steel (e.g. Gingher)		25	15

S. No	Tool Name	Specification	Image	CBT	Non-CBT
40	Paper Scissors	Local Market Lightweight, sharp stainless steel		25	15
41	paper cutter	local market sharp steel edge cutter		25	15
42	Self-Healing Cutting Mat	Olfa, Dahle, Alvin Grid marked, A1 or A2 size		25	15
43	Sewing Machine	Local Market Straight stitch + zigzag, domestic or industrial (Jack /Jukie / Brothers)		02	02
44	Serger / Overlock Machine	Local Market 3-thread or 4-thread		05	01
45	Boxboard sheet	Local Market thick, stiff paperboard		150	100
46	Button Maker Machine	Local Market cut and stitch clean buttonholes		02	02
47	Buttons shells	Local Market Aluminum, brass, or plastic		2 packs	2 packs

S. No	Tool Name	Specification	Image	CBT	Non-CBT
48	Thimble	Local Market Steel, leather, or silicone		25	15
49	Embroidery Hoop + Floss	Local Market Wooden or plastic hoop + stranded thread		26	15
50	Beading Tools	Local Market Beading needle, beading mat		100 packs	10 packs
51	Fabric Glue	Local Market Washable or permanent		26	15
52	Hot Glue Gun	Local Market Mini or full-size, low temp		05	02
53	Snaps, Hooks & Eyes, Velcro	Local Market Stainless or plastic		3 packs	3 packs
54	Eyelet / Grommet Setter	Local Market Punch + pliers		03	02
55	Label & Tag Gun	Local Market Pin-style tag applicator		06	05

S. No	Tool Name	Specification	Image	CBT	Non-CBT
56	Pattern Table	Local Market Wooden flat Surface		10	05
57	Light Table	Local Market flat surface with built-in lighting		02	01
58	Tracing Table	Local Market wooden tables		05	02
59	Pattern Cutting Table	Local Market large, flat, sturdy table wooden		05	02
60	French Curves	Kering Drawing smooth curves		26	15
61	Hip Curve Ruler	Fashionary, Fair gate Specific to body contour drawing		26	15
62	L-Square / Set Square	Fair gate, Sew Easy For right angles and balance		25	15
63	Japanese Scale	Kering 60 CM Plastic scale		26	15

S. No	Tool Name	Specification	Image	CBT	Non-CBT
64	Pencils (HB, 2H, 2B, etc.)	Faber-Castell, Staedtler For sketching fashion figures and clothing designs		26	26
65	Erasers	Staedtler, Faber-Castell For correcting mistakes		26	20
66	Pencil Sharpener	Faber-Castell, Staedtler Keeps pencil tips fine		26	20
67	Mechanical Pencils	Local Market For precision drawing		26	05
68	Paint Brushes	Faber-Castell, Staedtler flat and round brushes		12 pack	05 pack
69	Poster Paint	Faber-Castell, Staedtler Water-based, vibrant opaque colors		15 sets	05 sets
70	Colored Pencils	Faber-Castell, Staedtler For adding color to designs		15 sets	05 sets
71	Markers (e.g., Copic, Touch, Propmaker)	Faber-Castell, Staedtler For professional rendering of garments		12	08
72	Watercolors / Watercolor Pencils	Local Market For soft, fluid coloring effects		15 sets	05 sets

S. No	Tool Name	Specification	Image	CBT	Non-CBT
73	Pastels (Oil or Chalk)	Local Market For texture and soft shading		25	15
74	Acrylic Paints	Local Market For bold and textured illustrations		25	15
75	Fine liners / Technical Pens (e.g., 0.1mm to 0.8mm)	Local Market For outlining sketches		30	20
76	Black Ink Pens / Gel Pens	Local Market For final design outlines		30	20
77	Brush Pens	Local Market For dynamic lines and bold strokes		12	05
78	Squeegee	Speedball, Hunt rubber blade and wooden handle.		26	15
79	Screens for Screen printing	Local Market Wooden boundary with mesh screen		26	15
80	Embroidery Stand / Floor Frame	Local Market Hands-free frame mounted on a stand wooden		10	05
81	Calico Fabric	Local Market Plain-woven, unbleached cotton fabric		300 Yards	100 Yards

Lab 02: Tools and Equipment of Dress Making

(For Class Of 15 To 25 Students)

S. No	Tool Name	Specification	Image	CBT	Non-CBT
1	Measuring Tape	Measuring Tools		30	20
2	Tailor's Ruler/ Curve	Measuring Tools		25	15
3	Fabric Scissors	Cutting Tools		25	15
4	Paper Scissors	Cutting Tools		25	15
5	Rotary Cutter	Cutting Tools		25	15
6	Seam Ripper	Stitching Tools		25	15
7	Pins / Pin Cushion	Pinning Tools		25	15

S. No	Tool Name	Specification	Image	CBT	Non-CBT
8	Tailor's Chalk / Marker	Marking Tools		25	15
9	Needle Set	Sewing Tools		25	15
10	Sewing Machine	Sewing Equipment		25	15
11	Bobbins	Sewing Supplies		25	15
12	Ironing Board	Finishing tool		10	05
13	Iron	Finishing Tools		05	02
14	Pressing Ham	Finishing Tools		25	15
15	Pattern Paper	Drafting Tools		25	15

S. No	Tool Name	Specification	Image	CBT	Non-CBT
16	Tracing Wheel & Carbon	Marking Tools		10I	05
17	Thimble	Hand Sewing Tools		25	15
18	Fabric (Various Types)	Materials		200 Yards	100 Yards
19	Zippers, Buttons, Hooks	Notions		5 Packets	2 Packets
20	Fusing	Materials		10 Yards	5 Yards
21	Threads	Material		5 Packets	3 Packets

Lab 03: Tools and Equipment of ISMO

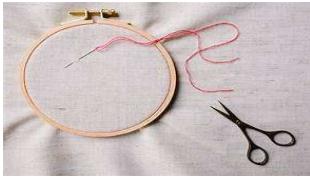
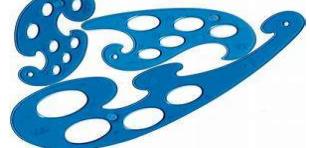
(For Class Of 15 To 25 Students)

S. No	Tool Name	Specification	Image	CBT	Non-CBT
1	Measuring Tape	60 inches, flexible fiberglass		26	10
2	Tailor's Chalk	Multi-color, triangular		50	20
3	Fabric Scissors	8 inches, stainless steel		26	15
4	Thread Clipper	Small, spring action		26	15
5	Tracing Wheel	hand-held tool with a spiked rotating wheel		26	15
6	Bobbins	Plastic or metal, machine-compatible		26	20

S. No	Tool Name	Specification	Image	CBT	Non-CBT
7	Bobbin Case	Plastic or metal, machine-compatible		26	20
8	Hand Sewing Needles	Universal #14/90		25	25
9	Seam Ripper	Ergonomic handle, sharp blade		26	20
10	Steam Iron	Steam iron with temperature control		04	2
11	Ironing Board	flat board wooden		04	2
12	Pin cushions	pin Holder		26	15

S. No	Tool Name	Specification	Image	CBT	Non-CBT
13	Fabric Marker Pen	Washable, air erasable ink		26	15
14	Display Mannequin	size 42 mannequin		05	5
15	Display Rack	Metal rack with rod		03	2
16	Hangers	Metal rod		200	200
17	Pattern Paper	Wide roll for pattern making		2 Rim	2 Rim
18	Loop Turner	Steel rod with hook		26	20
19	Pinking Shears	Zigzag edge blade		26	20

S. No	Tool Name	Specification	Image	CBT	Non-CBT
20	Paper Scissors	Lightweight, sharp stainless steel		25	15
21	Sewing Machine	Straight stitch + zigzag, domestic or industrial (Jack /Jukie / Brothers)		02	2
22	Serger / Overlock Machine	3-thread or 4-thread		06	02
23	Button Maker Machine	cut and stitch clean buttonholes		02	02
24	Buttons shells	Aluminum, brass, or plastic		2 packs	2 packs
25	Thimble	Steel, leather, or silicone		25	15

S. No	Tool Name	Specification	Image	CBT	Non-CBT
26	Embroidery Hoop + Floss	Wooden or plastic hoop + stranded thread		26	15
27	Eyelet / Grommet Setter	Punch + pliers		03	01
28	Label & Tag Gun	Pin-style tag applicator		06	01
29	Pattern Table	Wooden flat Surface		10	05
30	Light Table	flat surface with built-in lighting		02	01
31	Pattern Cutting Table	large, flat, sturdy table wooden		05	02
32	French Curves	Drawing smooth curves		26	15

S. No	Tool Name	Specification	Image	CBT	Non-CBT
33	Hip Curve Ruler	Specific to body contour drawing		26	15
34	Japanese Scale	60 CM, Plastic scale		26	15
35	Pencils (HB, 2H, 2B, etc.)	For sketching fashion figures and clothing designs		26	20
36	Erasers	For correcting mistakes		26	20
37	Pencil Sharpener	Keeps pencil tips fine		26	20
38	Paint Brushes	flat and round brushes		12 pack	09 pack
39	Poster Paint	Water-based, vibrant opaque colors		15 sets	15 sets

S. No	Tool Name	Specification	Image	CBT	Non-CBT
40	Black Ink Pens / Gel Pens	For final design outlines		30	20
41	Calico Fabric	Plain-woven, unbleached cotton fabric		300 Yards	200 Yards

NAVTIC

5. Services Sector

Lab 01: Tools and Equipment of Beautician

(For Class Of 15 To 25 Students)

S.NO	Item Description	Brand Name & Specification	Picture	CBT	Non-CBT
1	Balayage Board	Highlighting with Teeth Medium making hair coloring a breeze Its ultra-light construction prevents hand fatigue comfortable and safe hair dyeing		5	2
2	Hair Cutting Scissors	SD Pro Shears Flex Line series 5.5" Inches specialized high quality 100% stainless steel Easy to do a clean cut,		15	5
3	Hair Cutting Thinning and Texturizing Scissors	Made of stainless steel, ideal for professional hairdresser. 30 sharp teeth on one side, 20-25% thinning rate, 6.5-inch overall length scissors		10	5
4	Professional Metal Cordless Ergonomic Hair Clipper Trimmer with Digital Brushless Motor	Hair Trimmer Charging base Limit Comb 1/2/3/4/5/6mm USB Charging Cable Cleaning Brush		5	3
5	Sharp Ceramic Hair Straightener	Slim Plate Its slim plates provide precise, sleek results. ensures quick and even heat distribution. Achieve smooth and straight hairstyles with ease.		5	3

S.NO	Item Description	Brand Name & Specification	Picture	CBT	Non-CBT
6	Professional High Temperature Hair Straightener 1.5 Inch	Adjustable Temperature: 80°C-230°C (170°F-450°F) Rapid heat-up in seconds Ceramic plates for a silky-smooth finish Plate sizes: 40x107mm (1.5inch) LCD temperature display for precise styling control 360° tangle-free cable Auto shut off after 35 min		8	5
7	Professional High Heat Straightener	Titanium Plates Dual voltage 10ft swivel cord LED display Temperature control keys Max temperature of 480°F (250° C)		5	3
8	Professional Hair Dryer	2800 Watt Life span of this hair dryer has been prolonged by 2 Times than the normal one Powerful wind Concentrated capacity Also available in Black color 2800 Watt Life span of this hair dryer has been prolonged by 2 Times than the normal one Powerful wind Concentrated capacity Also available in Black color		5	3
9	Professional Hair Dryer	3000W Power – 2400 W Voltage – 220-240 V Frequency – 50/60 Hz Easy to handle – Light Weight Unique Air Duct – Wind Power Reduced Noise – Silent Cool shot button easy temperature shift Comes with 2 convenient concentrators attachments Smoothly changes between 2-speed setting		5	3

S.NO	Item Description	Brand Name & Specification	Picture	CBT	Non-CBT
		and 2 temperature setting . Super-hot temperature goes from 270°F (130°C) to 340°F (170°F) Extremely powerful reduces the drying time by 60% Extra-long power cord 3 meter			
10	Round blow dry Brush	32ABS Handle Ceramic Coated for hair shiny smooth healthy and reduce frizz. Tourmaline technology: tourmaline crystals emit negative ions, creating smooth, silky, shiny hair. Ceramic coating combines with aluminum barrel: Distributes heat evenly & faster		20	5
11	Round blow dry Brush	43ABS Handle Ceramic Coated for hair shiny smooth healthy and reduce frizz. Tourmaline technology: tourmaline crystals emit negative ions, creating smooth, silky, shiny hair. Ceramic coating combines with aluminum barrel: Distributes heat evenly & faster		20	5
12	Professional Electric Hair Curler	25mm Ceramic Curling Wand PTC heater with fast heat up. Temperature Control. Rated Voltage: 220V-240V		10	4

S.NO	Item Description	Brand Name & Specification	Picture	CBT	Non-CBT
13	Professional Electric Hair Curler	7mm Ceramic Curling Wand PTC heater with fast heat up. Temperature Control. Rated Voltage: 220V-240V		7	3
14	Professional Electric Hair Curler	19mm Ceramic Curling Wand PTC heater with fast heat up. Temperature Control. Rated Voltage: 220V-240V		7	3
16	Electric Hot Hair Curlers Rollers	3 Size 20 PCS Fuzzy Curling Barrel Material: Plastic Temperate: Hot Suitable for: Home, Salon, Travel, Home Use		3	1
17	Professional High Heat Crimper	Stylish hair crimper that helps you get your desired look Normal plate crimper allows hair to glide smoothly Ergonomic design for easy handling and comfortable grip Features Heat Protect technology for even heat distribution Prevents and protects hair from overheating		5	3
18	Neck Snap Haircut Cape	Large Black Silicone		10	5

Lab 02: Tools and Equipment of Advanced Beauty Therapy Skin Care & Hair Styling

(For Class Of 15 To 25 Students)

S.NO	Item Description	Specification	Picture	CBT	Non-CBT
1	Reception desk	Customized Width 48.4" / 123cm Depth 23.6" / 60cm Bench Height 35.4" / 90cm Height 43.3" / 110cm Material Silk Black MDF Color Black		1	1
2	Reception chairs	Boss Size (1): 175x63x76cm Color Any		1	1
3	Magazine rack Office/ Reception Room Literature Magazine Rack Holder	Customized Size: L100cm/39.4in)		2	2
4	Mini Washing Machine with Spin Dryer, Electric Compact Laundry Machines Portable Durable Design Washer Energy Saving, Rotary Controller	Dawlance/ Hire Washing Capacity 5.5lbs,		3	2

S.NO	Item Description	Specification	Picture	CBT	Non-CBT
5	Appointment booking / scheduling	ANY Stationary item		1	1
6	Salon POS System / cash register • Large Multi-line operator display • Spill-proof full-size keyboard with 119 flat keys • SD Card slot for data backup • Data export to PC via SD card • easy programming	SHARP Model Number XEA217B Product Dimensions 42.5 x 36 x 36.5 cm; 12.6 kg Item Weight 12.6 k		1	1
7	Hydraulic Styling Chair 1-Heavy duty steel frame 2-Heavy duty hydraulic pump& adjustable height and easy lock 3-Small cell high density foam provides extra comfortable	Flag beauty 2-Salon Designer Color Black Product Dimensions 12"D x 22.5"W x 26"H Size 1 Count (Pack of 1) Back Style Solid Back Frame Material Alloy Steel		15	5
8	Barber Chair Reclining Salon Chair for Hair Stylist, Height Adjustable Hydraulic Hair Salon Chair with Headrest	Color Grey 03 Product Dimensions 18.8"D x 18.8"W x 45.6"H Back Style High Special Feature Adjustable Height Adjustable Headrest Adjustable Backrest, Foot Rest		15	5

S.NO	Item Description	Specification	Picture	CBT	Non-CBT
9	Microdermabrasion Machine Diamond Microdermabrasion Machine Mcwdoit 65-68cmHg Suction Power Professional Dermabrasion for Skin Peeling Rejuvenation Lifting Tightening Beauty Device	<p>Brand Mcwdoit</p> <p>Product Benefits Removes dead skin, acne, scars, blackheads and pigmentation; lifts wrinkles and tightens skin</p> <p>Material Feature Diamond-tipped exfoliation heads</p>	 <p>With 9 Microcrystalline Diamond Heads It can be applied to many areas</p>	2	1
10	Gel Polish Lamp Nail Dryer	<p>LAKIE UV/LED lamp</p> <p>Specifications:</p> <ul style="list-style-type: none"> - 58 watt - Timer: 30/60/99 seconds - Ideal shape - With sensor - 21 UV/LED lights - Color white - Dimensions: 13 cm x 21 cm x 6.5 cm - Cord length: 140 cm 		2	1
11	Manicure Table set	Customized		1	1
12	Beauty stool for cutting and styling	<p>Beauty right</p> <ul style="list-style-type: none"> • Contemporary • Low Back Stool • Rounded Back Design • 360 Degree • Swivel Seat w/ Foot Rest • Height Adjustable • Seat with Gas Lift • Base Diameter: 17.625" 		15	5

S.NO	Item Description	Specification	Picture	CBT	Non-CBT
13	Butterfly Pedicure Stool	Pibbs 545 <ul style="list-style-type: none"> Padded & Upholstered Seat & Back Ergonomically Designed Back Rest Adjustable Height from 15" to 18" 5-Star Base Durable Casters Great Mobility 		5	2
14	Manicure pedicure sofa	Eco sleek <ul style="list-style-type: none"> Removal trays for manicure Adjustable shelves height and direction Comfortable headrest Sleek design to fit any spa room Customizable color 		5	1
15	Spa Pedicure foot basin ceramic oval white	Eco sleek <ul style="list-style-type: none"> Pedicure Foot Basin Ceramic Oval with Accessories in White. Crafted from high-quality ceramic. Durability and easy maintenance. Oval shape. Ergonomic design and smooth surface 		5	1
16	Facial & Massage Bed	Eco Professional Luxury <ul style="list-style-type: none"> Height Adjustment Range: 1.5 ft Reclining for back adjustment, from 115 to 180° Width: 2 ft Length: 6ft Material: High quality Leather 		3	1

S.NO	Item Description	Specification	Picture	CBT	Non-CBT
17	Shampoo Unit Recline Seat Adjustment	<p>Eco sleek</p> <p>Ergonomic Design: The cushioned seat with padded armrests ensure maximum comfort</p> <p>Durable Construction: Made with high-quality materials,</p> <p>Built-In Ceramic Sink: The deep ceramic basin with an adjustable faucet and drain system</p> <p>Easy Maintenance: Water-resistant upholstery and a smooth surface</p> <p>Sleek Aesthetic: The sophisticated black finish complements</p>		3	1
18	Salon Trolley	<p>Eco sleek</p> <p>Durable & Stylish: Made from high-quality plastic for long-lasting use.</p> <ul style="list-style-type: none"> -5 Spacious Drawers -Top Tray with Tool Holder: -360° Rotating Wheels -Lightweight & Portable: -Multi-Purpose Use 		15	5
19	Trolley Table	<p>Eagle Fortress Multi-Tool Storage</p> <p>Heat-Resistant Holders</p> <p>Adjustable Height</p> <p>Durable & Stable Base</p> <p>Space-Saving Design</p>		5	2
20	Portable Laundry Cart with Wheels	<p>Eco sleek</p> <p>Large capacity for storing towels It can be pressed fold storage space saving,</p> <p>Fiber handles lightweight,</p> <p>Made of high-quality of cloth and plastic</p> <p>Suitable for salon use or home use.</p>		1	1

S.NO	Item Description	Specification	Picture	CBT	Non-CBT
21	Facial Trolley	Eco sleek Stainless steel serving trolley Designed without sharp edges. Steel Frame Wooden Shelves Easy to clean Multipurpose trolley		2	1
22	Towel Warmer Cabinet Single	Eco sleek Adjust the temperature The single compartment holds an ample number of towels long-lasting performance		1	1
23	Wax Warmer	Eco sleek Paraffin wax warmer		3	1
24	Hood Dryer	Salon Designer Adjustable Temperature Timer Control Customize heat settings for various hair types and treatments. -360° Airflow Enclosure -Height-Adjustable Stand -Durable & Stable Design Sturdy supporting column plastic feet ensure balance and safety. -Professional-Grade Heater Delivers consistent warmth		3	1
25	Facial Steamer	Salon Designer Deep Cleansing & Hydration Opens pores for effective skin detoxification -Ozone Function Purifies steam -Adjustable Arm & Nozzle Provides flexibility precise steam direction. -Durable & Stable Design Features a sturdy base with		3	1

S.NO	Item Description	Specification	Picture	CBT	Non-CBT
		rolling wheels for easy mobility.			
26	Hydra Machine 7 in 1 1. RF/Radio Frequency Handle 2. Ultrasonic Handle 3. Cold Hammer 4. Skin Scrubber 5. Hydro Oxygen Spray Gun 6. Water Micro Dermabrasion Pen 7. LED Mask	the Star Seller Polymer atomizing pen: moisturizing, Quickly penetrates the skin increases the skin vitality. Ultrasonic handle: 10-300000 vibration, deep penetration repairs the skin below. Cold hammer handle: bleaches and rejuvenates the skin, shrinks pores reduces sensitivity. Skin scrubber grip: remove dead skin cells improve excess cuticle and fine skin. Hydra Dermabrasion Pen: deep cleansing, removes grease, blackheads, acne, dirt and increases the elasticity of the skin. RF lifting head: stimulates collagen, lifts and tightens the skin.		1	1
27	Magnifying Glass with Light and Wheels	Eco sleek This lamp has a 37" extendable arm making it fully adjustable salon mag lamp is 6'3" at its highest point. base with wheels makes this lamp easy to move around It has an on/off light switch,		3	2
28	Pedicure Manicure Cart Trolley Stool with Removable Accessory Tray	Eco sleek trolley cart with a cushion pad made from sturdy stainless steel plastic material multiple shelves spacious area for pedicures.		3	2

S.NO	Item Description	Specification	Picture	CBT	Non-CBT
29	Exhaust Fan	Usha Fan Usha Exhaust Fan 100% Copper Motor Winding, 1280 Rpm 5 Plastic Blades, Wall Mounted, White Color, 1-year Warranty		2	2
30	IPL Hair Removal:	IPL energy density: 1-50J/ cm2 IPL Frequency: 1-4s Wavelength: 640nm standard Laser energy: 1600mj Probe: 1064nm /532nm Instruction light: Imported infrared ray indicator Machine size: 44x53x89cm Gross weight: 68kgs		1	1
31	9 IN 1 HYDRA FACIAL	Skin Tightening, Whitening, Skin Rejuvenation, Acne Treatment, Dark Circles, Wrinkle Remover, Other, Pore Cleaner		1	1

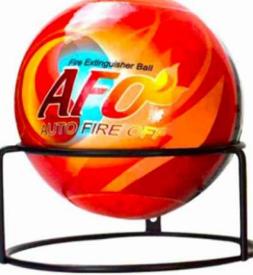
Lab 03: Tools and Equipment of Occupational Health & Safety

(For Class Of 15 To 25 Students)

S. No.	Item Name	Description	Image	CBT	Non-CBT
1	Lab Coats	Flame-resistant / chemical-resistant		25	25
2	Goggles	Safety Goggles or Chemical Splash Goggles		25	10
3	Face Shields	Different types subjected to work Environment		25	10
4	Gloves	Various types (Heat, Cutting, Chemicals Resistant)		25	20
5	Respirators	Half-face and full-face		25	10
6	Shoes	Various types		25	10
7	Hats	Hard Hats		25	10

S. No.	Item Name	Description	Image	CBT	Non-CBT
8	Ear Plugs	Various types		25	10
9	Breathing Apparatus	Any Model		10 Set	5 set
10	Eye washer / Eye Wash Station	Portable / Fix		5	2
11	Antiseptic wipes			5 pack	3 pack
12	Bandages	1 - 2 inch size		6 pack	6 pack
13	Gauze	Pack		6 pack	6 pack
14	Scissors			2	1

S. No.	Item Name	Description	Image	CBT	Non-CBT
15	Cotton	Role		2	2
16	Pyo dine	Antiseptic		5 Bottles	2 Bottles
17	First Aid Bandage	Sunny Plast		5 Pack	2 Pack
18	Fire extinguisher CO2	Portable		2 Cylanders (7 KG Each)	
19	Fire extinguisher Foam	Portable		2 Cylinder (9 Liter Each)	2 Cylinder (9 Liter Each)
20	Fire extinguisher DCP	Portable		2 Cylinder (9 Liter Each)	2 Cylinder (9 Liter Each)

S. No.	Item Name	Description	Image	CBT	Non-CBT
21	Fire extinguisher Water Type	Portable		2 Cylinder (9 Ltr Each)	2 Cylinder (9 Ltr Each)
22	Fire Blanket & Welding Curtains	Portable		2 Blankets (1.2 x 1.8m)	2 Blankets (1.2 x 1.8m)
23	Fire Buckets	Portable		2 Buckets	2 Buckets
24	Fire Extinguisher ball	Portable		2	2
25	Sprinkler Systems	Model		one Sample	one Sample
26	Fire Hoses	Model		2 Sample	2 Sample

S. No.	Item Name	Description	Image	CBT	Non-CBT
27	Fire Hose Reel	Model		2 Sample	2 Sample
28	Fire Hydrants	Model		1	1
29	Smoke Detector	Device (Model)		2 Sample	2 Sample
30	Heat Detector	Device (Model)		2 Sample	2 Sample
31	Fire Alarm System	Device (Model)		1 set	1 set
32	Safety signs and symbols posters	Different types subjected to Environment		2 poster Each	2 poster Each
33	Fire Cylanders Usage Posters	Different types subjected to Environment		2 poster Each	2 poster Each

Lab 04: Tools and Equipment of Auto Mechanic

(For Class Of 15 To 25 Students)

S. No	Tool	Specification	Image	CBT	Non-CBT
1	IRON TOOL TROLLEY	162 Pcs Tool Chest Set Chest part: With 7 pcs drawers Overall size : 765 x 465 x 812 mm Overall with casters size : 765 x 465 x 976 mm		3 - 5	2
2	Open-End Spanner	Sizes: 6-32mm 12pcs double open-end spanner set Size: 6-32mm 6x7mm to 30X32mm chrome vanadium steel (Cr-V steel)		3-5set	2
3	Box Spanner	DURATECH Offset Box Wrench Set, Metric, 9-Piece, 6-32mm, 75-Degree, Chrome Vanadium Steel Construction with Rolling Pouch		3-5set	2
4	Combination Spanner	23Pcs Combination Spanner Set x Manufactured from high quality carbon steel with a bright chrome plated finish x Size range: 6mm, to 32mm		3-5set	2
5	Ratchet Spanner	Sidchrome 12 Piece 467 Pro Series Metric Ratchet Spanner Set – Metric Sizes: 8-19mm Built from durable Chrome Vanadium steel		3-5set	2
6	Flex-Head Ratchet Wrench	TR TOOL ROCK 12pcs Flex Head Ratcheting Wrench Set- Metric Sizes: 8-19mm Ratchet Combination Wrenches CrV Gear Spanner Set		3-5set	2

S. No	Tool	Specification	Image	CBT	Non-CBT
7	Adjustable Wrench	CRAFTSMAN Adjustable Wrench, 6", 8", 12" Alloy Steel		5piece	3piece
8	Standard Adjustable Wrench	Proferred Standard Adjustable Wrench, Phosphate Finish, 6 to 12"		5piece	3piece
9	Pipe Wrench	Jetech size 36-inch Heavy Duty Straight Pipe Wrench, Adjustable Aluminum Plumber with Floating Hook Jaw and I-Beam Handle, Red		5piece	3piece
10	Line Wrench Kit	Includes 7 wrenches (sizes 13mm, to 19mm), catering to a wide range of sizes. High-Quality Chrome		3-5set	2
11	Adjustable Digital Torque Wrench	Tapha Tools Adjustable Digital Torque Wrench 19.9 to 99.5 ft-lbs (27-135 N-m) Torque Range, 5-27 mm Adjustable Jaw, LED and Buzzer Notification, Preset Memory		5	3
12	Socket Set (Metric)	Normal 6 to 32mm (6point) Stalwart 40-Piece Ratcheting Socket Wrench Set with Metric and Standard Sockets, Torque Handle, and Insulated Driver - Durable Hard-Plastic Case		3-5set	2
13	Socket Set (Metric)	Standard Metric Socket Set (12-point) 6mm to 32mm Material Chrome Vanadium Steel (Cr-V)		3-5set	2

S. No	Tool	Specification	Image	CBT	Non-CBT
14	Socket Set (Metric)	Deep socket 6 to 32mm (6point) 1/2" Drive Deep Impact Socket Set, 38-Piece Socket Set SAE 3/8 to 1-1/4 inch and Metric 10-32mm chrome vanadium steel with a black phosphate finish		3-5set	2
15	Socket Set (Metric)	LACKROBOT 32-Piece 1/2" Drive Metric Socket Set, 6-Point(8mm-32mm) 12-Point(10mm-19mm), Socket Ratchet Wrench Mechanic Tool Set, CR-V Steel		3-5set	2
16	Socket Set 3/4"	Normal 6 to 12mm (12point) KATSU 3/4" Socket Set 21 Pieces, 19-50mm Metric 12 Point Ratchet Wrench 24 Teeth in Steel Case		3-5set	2
17	Ratchets (1/4", 3/8", 1/2", and 3/4" drives)	1/4" drive deep sockets in: 6mm,7mm,8mm,10mm,12mm Chromium-vanadium Steel		3-5set	2
18	Impact wrench (electrical)	Takuoo Cordless 1/2 inch Brushless Impact Wrench, Max Torque (1000N.m) 740Ft-lbs Electric Impact Gun w/2x 4000mAh Battery, Charger & 6 Sockets		3-5set	2
19	Air impact wrench	INGCO AIW12562 1/2" Drive Air Impact Wrench		3-5set	2
20	Air flexible hose pipe	Compressed Air Spiral Hose WENTS Coiled air Hose 6 m with Connector High Pressure Flexible Hose Spiral Duct red		5piece	3piece

S. No	Tool	Specification	Image	CBT	Non-CBT
21	Impact Sockets Set	SP Tools SP20320 Imp. socket Set 1/2 Drive 15 Piece Long Series – Metric		3-5set	2
22	Rubber Insert Spark Plug Socket	Magnetic or rubber insert to hold plugs (14mm , 15mm ,16mm , 21mm) Powerbuilt 2 Piece Magnetic Spark Plug Socket Set - 641870		5piece	3piece
23	Locking Pliers (Vice Grips)	Deli Curved Jaw Locking Pliers Material high-quality chrome vanadium steel (Cr-V) or high carbon steel 5 inch (125 mm) 7 inch (175 mm) 10 inch (250 mm)		3-5set	2
24	Needle-Nose Pliers	SHOWAY 3pcs Jewelry Pliers Wire Cutter Pliers Needle Nose Pliers for Home Jewelry Making Wire Wrapping DIY Crafts (Size 5 inches 125 mm) PVC or rubber-coated		3-5set	2
25	Slip-Joint Pliers	Insulated Slip-Joint Pliers - Straight Jaws Chrome-vanadium steel body. Size (Common Lengths): 6 inch (150 mm) 8 inch (200 mm) Chrome Vanadium Steel (Cr-V)		3-5set	2
26	Diagonal Wire Cutter	Dykes 4.5" Side Cutter Diagonal Wire Cutting Pliers Diagonal Wire Cutter Side Cutting Pliers (wire cutter)		3-5set	2

S. No	Tool	Specification	Image	CBT	Non-CBT
27	Bolt Cutting Plier	Bolt Cutter Pliers Set, Industrial 14" Bolt Cutter + Mini 8" Bolt Cutter + 8" High Leverage Cable Cutter with Easily Cut Locks Chromium vanadium steel		3-5set	2
28	Snap-Ring Pliers Set	INGCO 4pcs Snap Ring Pliers Set 7 Inch Circlip Pliers Set Heavy Duty Internal/External Pliers Kit Straight/Bent Jaw Size: Each plier is 7 inches (180mm) in length Material: Constructed from carbon steel for durability and strength		3-5set	2
29	Hose Clamp Pliers	Hose Clamp Pliers Swivel Flat Band Flat-Band Ring-Type Car Water Pipe Removal Tool Size: Length: Typically, these pliers measure approximately 8 to 9 inches (200 to 230 mm)high-quality carbon steel		3-5set	2
30	Flathead Screw Driver Set	Kobalt-18-Piece-Plastic-Handle-Magnetic-Assorted-Screwdriver-Set 1/8 inch x 2-1/2 inch 3/16 inch x 4 inch 3/16 inch x 6 inch (Cabinet) 1/4 inch x 4 inch 1/4 inch x 6 inch 5/16 inch x 8 inch 3/8 inch x 8 inch		5-10 set	8
31	Phillips Screw Driver Set	STANLEY Cushion Grip Screwdriver PH0 x 60 mm PH1 x 75 mm PH2 x 100 mm PH3 x 150 mm		5-10 set	8

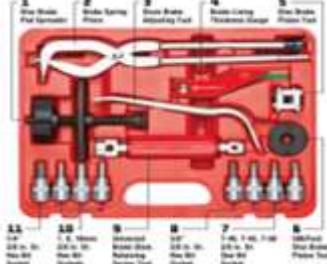
S. No	Tool	Specification	Image	CBT	Non-CBT
32	Torx socket set	DURATECH 23-Piece Torx Bit Socket and External Torx Socket Set, 8 Star Sockets, 7 Female E-Torx		3-5set	2
33	Precision Screwdrivers	Miniature flat/Torx/Phillips sets Precision Screwdriver Set 32 pieces SL1.0, SL1.5, SL2.0, SL2.5, SL3.0, SL3.5, SL4.0 mm PH000, PH00, PH0, PH1, PZ0, PZ1 T4, T5, T6, T7, T8, T9, T10, T15, T20 H0.7, H0.9, H1.3, H1.5, H2.0, H2.5, H3.0, H4.0 mm Tip Extension Support ergonomic handle screwdriver Chrome Vanadium Steel (Cr-V)		3-5set	2
34	Ball-Peen Hammers	hammer with a rounded end on the other side of the normal flat face. features 2.5lb head sizes between 8-48 oz.		5piece	3piece
35	Rubber Mallets	Rubber Hammer 16OZ 24OZ		5piece	3piece
36	Brass Hammers	Brass Hammer Sledge, 2lbs, Fiber glass Handle		5piece	3piece

S. No	Tool	Specification	Image	CBT	Non-CBT
37	Dead Blow Hammers	65mm Dead-Blow Hammer Made of Nitrile rubber		5piece	3piece
38	Hydraulic Floor Jacks	GEC Low Profile Hydraulic Floor Jack 3.5 Ton 2 Pump 105-520mm Height		2piece	1piece
39	Jack Stands	BIG RED T46202 Torin Steel Jack Stands: 6 Ton (12,000 lb) Capacity, Red		6	3piece
40	Transmission Jacks	Dragway Tools 1000 LB 2 Stage Hydraulic Transmission Jack Lift Hoist with Foot Pump		1 piece	1piece
41	Piston Ring Compressors tool set	TOPTUL Piston Ring Compressor 53-125 mm		3-5set	2
42	T handle set	Autoly T Handle Wrench Set 8mm, 10mm, 12mm, 14mm Hex Socket Key Wrench Set Chrome Vanadium Steel		3-5set	2

S. No	Tool	Specification	Image	CBT	Non-CBT
43	Feeler Gauges	Mitutoyo 184-307S Thickness Feeler Gage Set, Straight Leaves, 0.03-0.5 mm Thickness, 100mm Length		3-5set	2
44	Magnetic Trays	Made of premium Stainless Steel Ideal tray for storing small parts, tools, nuts, bolts, screws and etc.		10 pieces	8piece
45	Gear Oil gun	NATIONAL SPENCER 321 5G GEAR OIL PUMP vinyl hose with curved nozzle Buna N seal		2set	1set
46	Pick and Hook Sets	Wadflow Pick and Hook Set - 4 Piece Set		3-5set	2
47	Magnetic Pickup Tools	GUTIMORE Flexible Magnetic Pickup Tool, 25" Long Bend-It Magnet Snake Pickup, Bendable Magnetic Pickup 2LB		5piece	3piece
48	Grease Guns	Lever or pistol-grip, 6000 PSI Grease gun Material : 1.2mm Steel tube + Aluminum-Cast		2piece	1piece

S. No	Tool	Specification	Image	CBT	Non-CBT
49	Garage Creeper	PM PERFORMOTOR 48" Folding 2 in 1 Rolling Z Creeper Alloy Steel		5piece	3piece
50	Cooling System Pressure Tester	28PCS Universal Radiator Pressure Tester & Vacuum Type Cooling System Kit Material: High-Quality Aluminum, Rubber, Plastic Suitcase Dimension: 23 "(L) x 18.9"(W) x 4.3"(H) Coolant Pipe Length: 59"(L)		2set	1set
51	Engine Compression Tester (Petrol Engine)	Compression Tester Kit 0-300 PSI Petrol Gas Engine Cylinder Pressure Gauge Automotive Tool for Motorcycle Car Truck From compatibility: vier Adapter (M10 x 1.0 mm, M12 x 1.25 mm, M14 x 1.25 mm, M18 x 1.5 mm)		2set	1set
52	Engine Compression Tester (Diesel Engine)	17pc Professional Diesel Engine Cylinder Compression Tester Tool Set Kit 1000PSI Case Size: Length: ~14 to 16 inches (355 to 406 mm) Width: ~10 to 12 inches (254 to 305 mm) Height: ~3 to 4 inches (76 to 102 mm)		2set	1set
53	Fuel Pressure Tester Kit	BETOOLL Fuel Pressure Test Kit - Fuel Pressure Gauge - 0-100PSI Fuel Injection Pump Pressure Tester Gauge Kit for Car Case Size: Length: ~12 inches (305 mm) Width: ~9 inches (230 mm) Height: ~3 inches (76 mm)		2set	1set

S. No	Tool	Specification	Image	CBT	Non-CBT
54	Engine Oil Pressure Tester	Oil Pressure Tester Tool, Oil Pressure Gauge kit, 0-140 PSI Pressure Test Diagnostic Tools, Engine Oil Pressure Tester Tool kit, for car Truck (Blue)Case Size: Length: ~12 inches (305 mm) Width: ~9 inches (230 mm) Height: ~3 inches (76 mm)		2set	1set
55	Wheel Balancing Machine	BFH1000 Wheel Balancer Mount the wheel with patented Power Clamp Dimensions: Width: 64 inches (1626 mm) Depth: 64 inches (1626 mm) Height: 64 inches (1626 mm) Wheel Compatibility: Diameter Range: 8 to 30 inches Width Capacity: Up to 21 inches Maximum Assembly Weight: 154 lbs (70 kg)		1 no	1
56	Wheel Alignment Machine	Aston Wheel Alignment Machine Alignment Machine Wheel Alignment System Wheel aligner. 3D Fully Automatic. Dual Screens. Estimated Dimensions: Length: ~64 to 72 inches (1625 to 1830 mm) Width: ~72 to 80 inches (1830 to 2032 mm) Height: ~72 to 80 inches (1830 to 2032 mm)		1 no	1
57	Siccor lift	Bay Max 12K Specifications: Capacity: 12,000 lbs (5.4 tons) Overall Length: 242-3/4 inches (6,166 mm) Deck Length: 185 inches (4,700 mm) Overall Width: 91-1/2 inches (2,324 mm)		1 no	1
58	Universal EFI Diagnostic Scanner	Launch X431 PRO 5 OBD2 Scanner Diagnostic Tool Support ECU Programming 2025 Launch new exclusive released automotive diagnosis toll		2	1

S. No	Tool	Specification	Image	CBT	Non-CBT
59	Brake Service Tool Kit	Power built Brake Service Set, 15 Piece, Remove Springs, Adjust Vehicle Drum Brakes, Spread Disc Pads	 A red plastic tool kit containing various tools for brake service. It includes a box labeled 'Brake Service Tool Kit' with numbered callouts: 1. Brake Shoe Pin Remover, 2. Brake Spring Press, 3. Brake Shoe Assembly Tool, 4. Brake Shoe Thickness Gauge, 5. Brake Shoe Pin Tool. Below the box are numbered slots for tools: 1.5" 1/2" Drive SAE, 1/2" 1/2" Drive Metric, Universal Wrench, SAE Spline, SAE Spline.	2set	1set
60	Oil Drain Pan	FloTool 42003MI 16-Quart Drain Container	 A black plastic oil drain pan with a red handle and a red cap on the side.	5piece	3piece
61	Oil Filter Wrench	QIBAOACR Belt Type Oil Filter Wrench Car Multi-Purpose Adjustable Filter removal Wrench Auto Engine Tools Motorcycle Repair Belt Wrench for Filter and Pipe 8 Inch Blue	 A blue adjustable wrench with a yellow O-ring attached to its handle.	3piece	2piece
62	Safety Shoes	Safe toe M-8356RB SBP SRC Electrical Hazard EH & Heat Resistant HRO High Ankle Safety Shoes	 A pair of black safety shoes with a high black sole and a green box.	25 pairs	25 pairs
63	Safety Goggles	INGCO HSG02 Safety Goggles 16Pcs/Box Handyman	 A pair of white safety goggles with a yellow strap.	25 pairs	25 pairs
64	Overall Apron (Dangri)	Cotton Safety Dangri Suits	 A person wearing a blue overall apron with white stripes on the sleeves and a white belt.	25 pairs	25 pairs
65	Dotted Hand Gloves	Gloves BLUE Dotted for Bikers & Winter season	 A pair of blue and black dotted hand gloves.	25 pairs	25 pairs

S. No	Tool	Specification	Image	CBT	Non-CBT
66	Respirator	3M 6800 Plus 2 Filter Reusable Full Face Mask Respirator		5piece	3piece
67	Safety Helmet	Un breakable Polycarbonate Yellow Air Ventilated Safety Helmets		25 pairs	25 pairs
68	Star Allen Key Set	Harden 18Pcs Long Hex & Torx Key Wrench Set 540618 18Pcs Long Hex & Torx Key Wrench Set xHex key wrench size range: 1.5,2,2.5,3,4,5,6,8,10mm xTorx key wrench size range: T10, T15, T20, T25, T27, T30, T40, T45, T50		5set	3set
69	Clutch Aligning Tool	Clutch Alignment / Aligning Tool Fully Universal Metal - Metric 11 - 25mm & SAE sizes (1" and 1-1/8") f		2set	1set
70	Allen Key Set	Total Hex Keys Set Alloy Steel Package Dimensions 31.3 x 18.9 x 3.2 cm; 1.05 kg		5set	3set
71	Ball Joint Puller	Hazet 1779-1 Universal Ball Joint Puller Product Dimensions 6.5 x 3.99 x 8 cm; 45.36 g		2	1

S. No	Tool	Specification	Image	CBT	Non-CBT
72	Two Post Lift	Stainless Steel Two Post Car Service Lifts, 4-6 tons Max Lifting Height 1830 mm Min Lowering Height 110 mm Width Between Two Posts 2800 mm		1	1
73	Air Compressor	Pacific Ranger Large Size Electric Industrial Air Compressor Approx. measurements: 6'L x 45.5"H x 28"D Max. pressure: 175 PSI - Power: 600V, 3-phase, hardwire connectivity		1	1
74	Impact Screwdriver Set	1/2" Manual Hand Impact Driver Set Extractor-12 PCS Impact Screwdriver S2 Steel Much More Durable Disengage Rusted Fasteners or Frozen Bolts Manual Reversible Impact Driver Set 7.8"L x 2.5"W x 2"H		5set	3set
75	Funnel Set	Plastic Funnel Set Premium 4 Piece Funnel Set Red Plastic Package Dimensions 16.26 x 11.68 x 9.4 cm; 27.21 g		5set	3set
76	Exhaust Gas Analyzer	NOVA Plus – Portable Emission Analyzer Industrial combustion and emissions tuning, trouble-shooting or compliance reporting Simultaneous measurement up to 8 gases		1	1
77	Injector Cleaner and Testing Machine	Launch - CNC-603A 2 in 1 Automatic Injector Cleaner & Tester Power: AC110V-127V, 50Hz/60Hz 3Amax or AC220V-230V, 50Hz/60Hz 1.5Amax		1	1

S. No	Tool	Specification	Image	CBT	Non-CBT
78	Spark Plug Test Machine	LUTIFIX Automotive Spark Plug Tester, 110V Spark Plug Detector Diagnostic Tool Diagnostic Scanner Vehicle Detector for 12V Vehicles		1	1
79	Bench Vice	Wadflow WBV1A04 Bench Vice body cast iron Size200mm (8")		6piece	3piece
80	Brake Bleeder Kit	WNZ Brake Bleeder kit Master Cylinder Bleeder kit Pressure Brake Bleeder Tool (5L) Product Dimensions 15 x 10 x 13 inches		1	1
81	Brake Caliper Piston Puller	Blue Spot Tools Brake Disc Caliper Piston Spreader Tool Blue Spot 3-in-1 Brake and Pipe Bender (6mm, 8mm, 10mm)		5	3
82	Catch Pan (Tray) Set	Oil-resistant plastic, 3–5 tray sizes, 5L+ capacity each		12piece	8piece
83	Battery Tester	KZYEE KS21 Battery Tester 12V 100-2000 CCA Auto Car Battery Load Test Digital Analyzer for Detect Health Faults, Cranking and Charging System		1	1
84	Battery Jump Starter	10Ah 12V Portable Power Station & Emergency Jump Start With 300PSI Air Compressor (Petrol 2500cc/Diesel 2000cc)		1	1

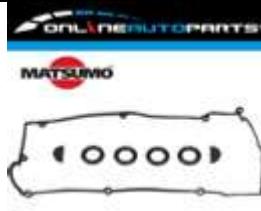
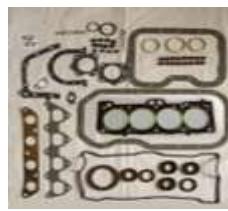
S. No	Tool	Specification	Image	CBT	Non-CBT
85	Hack Saw Frame	Polished Metal Hacksaw Frame, For Cutting Item Length: 300 millimeters, Item Weight: 0.3615 kilograms		12piece	8piece
86	Hydraulic Press	Capacity Stroke Space Interval Bed Rail Opening Post Opening Base Width Height Ship Weight 50 Tons 7" 5-1/2" 9" 32" 44" 68" 672 lbs.		1	1
87	Fire Extinguisher	Dry powder/CO ₂ type, 4–9 kg capacity, ISI certified		8	5
88	4-Stroke Engine Cycle Trainer Model	4 Stroke Single Cylinder Petrol Engine The section model represents a real 4-stroke petrol engine, cut in every detail, carburetor, ignition, etc. The suction-exhaust-transfer channels are especially highlighted so as to make it easy to learn the cycle.		1	1
89	2-Stroke Engine Cycle Trainer Model	Two-stroke engine, cross-section model Cross-section models on bases Every model includes a flywheel, for illustrating valve control and fuel injection, with built-in lamps Base dimensions: approx. 205x210 mm, height: approx. 350 mm		1	1
90	Carburetor Engine Trainer Model	Engine Structure Training Equipment (Carburetor Type): Educational model featuring a 4-cylinder gasoline engine with carburetor for hands-on training.		2	1

S. No	Tool	Specification	Image		CBT	Non-CBT
91	Diesel Engine Trainer Model	Diesel Engine Bench – Trainer (TIER 4F) ConsuLab's Diesel Engine Training Bench HV-950-C4.4 is a fully functioning Caterpillar C4.4 Diesel Engine bench mounted on a mobile steel stand			2	1
92	Diesel Engine (Half-Cut) Vehicle Trainer	Diesel engine vehicle trainer is a valuable educational tool used in automotive training program (Diesel engine with gear box, complete electrical wiring, fuel system, turbo charger, lubrication system, cooling system, exhaust system			1	1
93	EFI Engine Trainer Model	2018-2014 Corolla 1.8L engine trainer with AC The ConsuLab EM-140C-TYO2A engine trainer is a fully functional recycled engine mounted on a mobile stand. (All sensors, All actuators, Speed meter, Fuse box, relay box, with diagnoses connector starting condition			2	1
94	EFI Half-Cut Vehicle Trainer Model	Efi half cut vehicle trainer part specifying model Engine Control Unit (ECU) ECU Electronic control Unit Relay Box Fuse Box Ignition Switch Sensors			1	1
95	Turbocharger Trainer Model	The Turbine Engine Trainer is a compact, educational model with a DC motor-driven compressor, providing over 12 kg of thrust for training purposes.			1	1
96	Manual Transmission Cutaway Trainer Model	5 Speed Gearbox With Clutch Cutaway Educational Trainer automotive training equipment for teaching and training purposes of automotive technology Operated: Manually (Through a Crank Handle) Equipment Layout: On Stand with Wheels			1	1

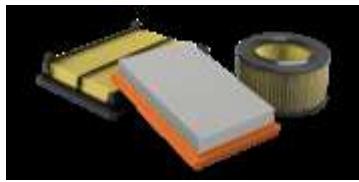
S. No	Tool	Specification	Image	CBT	Non-CBT
		Dimensions: 90 x 60 x 100(h) cm			
97	Automatic Transmission Cutaway Trainer Model	RWD 5 Speed Automatic Transmission Cutaway 4 Gears and Reverse Casing Torque converter Oil pump Stationary plate clutch Rotary plate clutch Planetary gear train Hydraulic circuit valve Centrifugal regulator		1	1
98	Manual Transaxle Cutaway Trainer Model	FWD 5 Speed Manual Gearbox with Differential Cutaway Operated: Manually (Through a Crank Handle) Equipment Layout: On Stand with Wheels Dimensions: 60 x 60 x 60(h) cm Net Weight: 40 kg Gross Weight: 60 kg		1	1
99	Automatic Transaxle Cutaway Trainer Model	Automatic Transmission Educational Trainer Specifications Dimensions: 900 x 600 x 1000 mm (35.43 x 23.62 x 39.37 in) Transmission type: rear-drive, 4 Forward gears + Reverse Components: torque converter, oil pump, stationary plate clutch, rotary plate clutch, planetary gear train, hydraulic circuit valve, centrifugal regulator		1	1
100	Overall Computer System with Projector	Desktop PC (i5/i7, 8GB+ RAM, 500GB SSD), HD projector (3000+ lumens, HDMI/VGA input), screen		1	1

Lab 11: Consumable Materials of Auto Mechanic

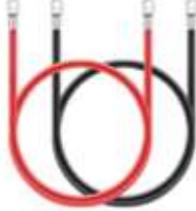
(For Class Of 15 To 25 Students)

S. No	Tool	Specification	Image	CBT	Non-CBT
1	Engine Oil (Havoline 20W-50)	Havoline		30 liters	25 liters
2	Carburetor Cleaner	NASA		10	8
3	WD 40	WD-40		10	8
4	Tappet Cover Gasket as per sample engine	M.D Japan		12	10
5	Complete Head Gasket	M.D Japan		12	10
6	Only Head Gasket (Double Size) as per sample engine	M.D Japan		6	3

S. No	Tool	Specification	Image	CBT	Non-CBT
7	Petrol Fuel	Local		100 liter	80 liter
8	Diesel Fuel	Local		100 liter	80 liter
9	Kerosine Oil	Local		100 liter	80liter
10	Diesel Engine Oil (Delo 400MGX)	CALTEX DELO 400MGX		30 liter	25 liter
11	12 Volt Battery S50	12 VOLT BATTERY S50		5	3
12	12 Volt Battery S100	12 VOLT BATTERY S100		5	3
13	Silicon	GMSA		24	20

S. No	Tool	Specification	Image	CBT	Non-CBT
14	Grease	Caltex		10	8
15	Elfi	GMSA 20gm		1 box	1 box
16	Magic Super Glue	GMSA 4gm		1 box	1 box
17	Insulation Tape	Local (as per sample engine)		3 dozen	2 dozen
18	Air Filter (as per sample)	Local (as per sample)		5	3
19	Petrol Pipe	Local (as per sample)		50 ft	30ft
20	Petrol Pipe Small, Medium Clips	Local (as per sample engine)		3 dozen	2 dozen

S. No	Tool	Specification	Image	CBT	Non-CBT
21	Water Hose Pipe S,M	Local (as per sample)		10	8
22	Spark Plug Ngk 2 M.D Japan	M.D Japan (as per sample)		1 box	1 box
23	High Tension Leads	M.D Japan (as per sample)		2box	2box
24	Distributor Cap	M.D Japan (as per sample)		2	2
25	Piston Ring Set Size 25	M.D Japan (as per sample)		10 pack	8 pack
26	Carburetor Complete Gasket Kit	M.D Japan (as per sample)		5pack	3pack
27	Brake Oil Fuel Big Bottle	GAURD DOT 3 500CC		2dozen	2dozen

S. No	Tool	Specification	Image	CBT	Non-CBT
28	Battery Wire Black Color	Local (as per sample engine)		50 ft	30ft
29	Battery Wire Red Color	Local (as per sample engine)		50 ft	30ft
30	Bolt Size Kabli 17, 10, 14, 19	Local (as per sample engine)		1 box	1 box
31	Battery Terminal	Local (as per sample engine)		1 box	1 box
32	Horn Thimble	Local (as per sample engine)		1 box	1 box
33	Plane Washer	8mm, 10mm, 12mm, 14mm, 17mm Local		1 box	1 box
34	Engine Coolant	Aisin		20 liter	15 liter

S. No	Tool	Specification	Image	CBT	Non-CBT
35	Oil Filter as per sample engine	GUARD		12	10
36	Power Steering Fluid	GUARD		1 box	1 box
37	Dangri	Kabli		25	25
38	Transmission Fluid	ZIC		20 liter	15 liter
39	Transmission Oil	ZIC		20 liter	15 liter
40	Wire Thimble Male & Female	Local (as per sample engine)		1 box	1 box
41	NUT	8mm, 10mm, 12mm, 14mm, 17mm, 19mm Local		3box	3box

S. No	Tool	Specification	Image	CBT	Non-CBT
42	10 No Bolt 1 Inch Length	Local (as per sample engine)		2box	2box
43	12 No Bolt 1 Inch Length	Local (as per sample engine)		2box	2box
44	12 No Bolt 2 Inch Length	Local (as per sample engine)		2box	2box
45	14 No Bolt 2 Inch Length	Local (as per sample engine)		2box	2box
46	14 No Bolt 3 Inch Length	Local (as per sample engine)		2box	2box
47	17 No Bolt 4 Inch Length	Local (as per sample engine)		2box	2box
48	Battery Wire Positive Pole	Local (as per sample engine)		2box	2box

S. No	Tool	Specification	Image	CBT	Non-CBT
49	Diesel Fuel Pipe	Local (as per sample engine)		50 ft	30ft
50	Water Heater Hose Clamp Medium Size	Local (as per sample engine)		1 box	1 box
51	CB POINT as per sample engine	DANSO Local (as per sample engine)		6	3
52	Generator Belt	Local (as per sample engine)		3	2
53	Cotton Waste	Local (as per sample engine)		100kg	80kg
54	Automotive Dotted Gloves	Local (as per sample engine)		25	25

S. No	Tool	Specification	Image	CBT	Non-CBT
55	Embrey Paper (0,2,4,6 SIZE)	Local (as per sample engine)		5pack	4pack
56	THRUST BEARING STANDARD SIZE (as per sample engine)	Local (as per sample engine)		2pack	2pack
57	BIG END SHELL BEARING STANDARD SIZE (as per sample engine)	Local (as per sample engine)		2pack	2pack
58	FUSE (10AMP, 15 AMP,16AMP,20AMP)	Local (as per sample engine)		2pack	2pack
59	Fuel Filter	Local (as per sample engine)		12	10
60	Main oil seal (as per sample engine)	Local (as per sample engine)		6	5
61	Crankshaft oil seal (as per sample engine)	Local (as per sample engine)		6	5

S. No	Tool	Specification	Image	CBT	Non-CBT
62	Timing belt (as per sample engine)	Local (as per sample engine)		3	2

NAVTIC

Lab 05: Tools and Equipment of Auto Electrician

(For Class Of 15 To 25 Students)

S. No	Tool	Specification	Image	CBT	Non-CBT
1	Iron Tool Trolley	162 Pcs Tool Chest Set Chest part: With 7 pcs drawers Overall size:765 x 465 x 812 mm Overall with casters size : 765 x 465 x 976 mm		3 - 5	2
2	Open-End Spanner	Sizes: 6-32mm 12pcs double open-end spanner set Size: 6-32mm 6x7mm to 30X32mm chrome vanadium steel (Cr-V steel)		3-5set	2
3	Box Spanner	DURATECH Offset Box Wrench Set, Metric, 9-Piece, 6-32mm, 75-Degree, Chrome Vanadium Steel Construction with Rolling Pouch		3-5set	2
4	Combination Spanner	23Pcs Combination Spanner Set Manufactured from high quality carbon steel with a bright chrome plated finish Size range: 6mm,to 32mm		3-5set	2
5	Ratchet Spanner	Sidchrome 12 Piece 467 Pro Series Metric Ratchet Spanner Set – Metric Sizes: 8-19mm Built from durable Chrome Vanadium steel		3-5set	2
6	Flex-Head Ratchet Wrench	TR TOOLROCK 12pcs Flex Head Ratcheting Wrench Set- Metric Sizes: 8-19mm Ratchet Combination Wrenches CrV Gear Spanner Set		3-5set	2

S. No	Tool	Specification	Image	CBT	Non-CBT
7	Adjustable Wrench	CRAFTSMAN Adjustable Wrench, 6", 8", 12" Alloy Steel		5piece	3piece
8	Standard Adjustable Wrench	Preferred Standard Adjustable Wrench, Phosphate Finish, 6 to 12"		5piece	3piece
9	Adjustable Digital Torque Wrench	Tapha Tools Adjustable Digital Torque Wrench 19.9 to 99.5 ft-lbs (27-135 N-m) Torque Range, 5-27 mm Adjustable Jaw, LED and Buzzer Notification, Preset Memory		3 - 5	2
10	Socket Set (Metric)	Normal 6 to 32mm (6point) Stalwart 40-Piece Ratcheting Socket Wrench Set with Metric and Standard Sockets, Torque Handle, and Insulated Driver - Durable Hard-Plastic Case		3-5set	2
11	Socket Set (Metric)	Standard Metric Socket Set (12-point) 6mm to 32mm Metarial Chrome Vanadium Steel (Cr-V)		3-5set	2
12	Socket Set (Metric)	Deep socket 6 to 32mm (6point) 1/2" Drive Deep Impact Socket Set, 38-Piece Socket Set SAE 3/8 to 1-1/4 inch and Metric 10-32mm chrome vanadium steel with a black phosphate finish		3-5set	2

S. No	Tool	Specification	Image	CBT	Non-CBT
13	Socket Set (Metric)	LACKROBOT 32-Piece 1/2" Drive Metric Socket Set, 6-Point (8mm-32mm) 12-Point (10mm-19mm), Socket Ratchet Wrench Mechanic Tool Set, CR-V Steel		3-5set	2
14	Socket Set 3/4"	Normal 6 to 12mm (12point) KATSU 3/4" Socket Set 21 Pieces, 19-50mm Metric 12 Point Ratchet Wrench 24 Teeth in Steel Case		3-5set	2
15	Ratchets (1/4", 3/8", 1/2", And 3/4" Drives)	1/4" drive deep sockets in: 6mm, 7mm, 8mm, 10mm, 12mm Chromium-vanadium Steel		3-5set	2
16	Impact Wrench (Electrical)	Takuo Cordless 1/2 inch Brushless Impact Wrench, Max Torque (1000N.m) 740Ft-lbs Electric Impact Gun w/2x 4000mAh Battery, Charger & 6 Sockets		3-5set	2
17	Air Impact Wrench	INGCO AIW12562 1/2" Drive Air Impact Wrench		3-5set	2
18	Air Flexible Hose Pipe	Compressed Air Spiral Hose WENTS Coiled air Hose 6 m with Connector High Pressure Flexible Hose Spiral Duct red		5piece	3piece
19	Impact Sockets Set	SP Tools SP20320 Imp. socket Set 1/2 Drive 15 Piece Long Series – Metric		3-5set	2

S. No	Tool	Specification	Image	CBT	Non-CBT
20	Rubber Insert Spark Plug Socket	Magnetic or rubber insert to hold plugs (14mm, 15mm, 16mm, 21mm) Power built 2 Piece Magnetic Spark Plug Socket Set - 641870		5piece	3piece
21	Locking Pliers (Vice Grips)	Deli Curved Jaw Locking Pliers Material high-quality chrome vanadium steel (Cr-V) or high carbon steel 5 inch (125 mm) 7 inch (175 mm) 10 inch (250 mm)		3-5set	2
22	Needle-Nose Pliers	SHOWAY 3pcs Jewelry Pliers Wire Cutter Pliers Needle Nose Pliers for Home Jewelry Making Wire Wrapping DIY Crafts (Size 5 inches 125 mm) PVC or rubber-coated		3-5set	2
23	Slip-Joint Pliers	Insulated Slip-Joint Pliers - Straight Jaws Chrome-vanadium steel body. Size (Common Lengths): 6 inch (150 mm) 8 inch (200 mm) Chrome Vanadium Steel (Cr-V)		3-5set	2
24	Diagonal Wire Cutter	Dykes 4.5" Side Cutter Diagonal Wire Cutting Pliers Diagonal Wire Cutter Side Cutting Pliers (wire cutter)		3-5set	2
25	Snap-Ring Pliers Set	INGCO 4pcs Snap Ring Pliers Set 7 Inch Circlip Pliers Set Heavy Duty Internal/External Pliers Kit Straight/Bent Jaw Size: Each plier is 7 inches (180mm) in length Material: Constructed from carbon steel for durability and strength		3-5set	2

S. No	Tool	Specification	Image	CBT	Non-CBT
26	Hose Clamp Pliers	Hose Clamp Pliers Swivel Flat Band Flat-Band Ring-Type Car Water Pipe Removal Tool Size: Length: Typically, these pliers measure approximately 8 to 9 inches (200 to 230 mm) high-quality carbon steel		3-5set	2
27	Flathead Screw Driver Set	Kobalt-18-Piece-Plastic-Handle-Magnetic-Assorted-Screwdriver-Set 1/8 inch x 2-1/2 inch 3/16 inch x 4 inch 3/16 inch x 6 inch (Cabinet) 1/4 inch x 4 inch 1/4 inch x 6 inch 5/16 inch x 8 inch 3/8 inch x 8 inch		5-10 set	8
28	Phillips Screw Driver Set	STANLEY Cushion Grip Screwdriver PH0 x 60 mm PH1 x 75 mm PH2 x 100 mm PH3 x 150 mm		5-10 set	8
29	Torx Socket Set	DURATECH 23-Piece Torx Bit Socket and External Torx Socket Set, 8 Star Sockets, 7 Female E-Torx		3-5set	2
30	Precision Screwdrivers	Miniature flat/Torx/Phillips sets Precision Screwdriver Set 32 pieces SL1.0, SL1.5, SL2.0, SL2.5, SL3.0, SL3.5, SL4.0 mm PH000, PH00, PH0, PH1, PZ0, PZ1 T4, T5, T6, T7, T8, T9, T10, T15, T20 H0.7, H0.9, H1.3, H1.5, H2.0, H2.5, H3.0, H4.0 mm Tip Extension Support ergonomic handle screwdriver Chrome Vanadium Steel (Cr-V)		3-5set	2

S. No	Tool	Specification	Image	CBT	Non-CBT
31	Ball-Peen Hammers	hammer with a rounded end on the other side of the normal flat face. features 2.5lb head sizes between 8-48 oz.		5piece	3piece
32	Rubber Mallets	Rubber Hammer 16OZ 24OZ		5piece	3piece
33	Brass Hammers	Brass Hammer Sledge, 2lbs, Fiber glass Handle		5piece	3piece
34	Dead Blow Hammers	65mm Dead-Blow Hammer Made of Nitrile rubber		5piece	3piece
35	Hydraulic Floor Jacks	GEC Low Profile Hydraulic Floor Jack 3.5 Ton 2 Pump 105-520mm Height		2piece	1piece
36	Jack Stands	BIG RED T46202 Torin Steel Jack Stands: 6 Ton (12,000 lb) Capacity, Red		6	3
37	T Handle Set	Autoly T Handle Wrench Set 8mm, 10mm, 12mm, 14mm Hex Socket Key Wrench Set Chrome Vanadium Steel		3-5set	2
38	Feeler Gauges	Mitutoyo 184-307S Thickness Feeler Gage Set, Straight Leaves, 0.03-0.5mm Thickness, 100mm Length		3-5set	2

S. No	Tool	Specification	Image	CBT	Non-CBT
39	Magnetic Trays	Made of premium Stainless Steel Ideal tray for storing small parts, tools, nuts, bolts, screws and etc.		5-10 piece	8piece
40	Pick And Hook Sets	Wadfow Pick and Hook Set - 4 Piece Set		3-5set	2
41	Magnetic Pickup Tools	GUTIMORE Flexible Magnetic Pickup Tool, 25" Long Bend-It Magnet Snake Pickup, Bendable Magnetic Pickup 2LB		3-5set	2
42	Garage Creeper	PM PERFORMOTOR 48" Folding 2 in 1 Rolling Z Creeper Alloy Steel		3-5set	2
43	Cooling System Pressure Tester	28PCS Universal Radiator Pressure Tester & Vacuum Type Cooling System Kit Material: High-Quality Aluminum, Rubber, Plastic Suitcase Dimension: 23 "(L) x 18.9"(W) x 4.3"(H) Coolant Pipe Length: 59"(L)		2set	1set
44	Engine Compression Tester (Petrol Engine)	Compression Tester Kit 0-300 PSI Petrol Gas Engine Cylinder Pressure Gauge Automotive Tool for Motorcycle Car Truck From compatibility: vier Adapter (M10 x 1.0 mm, M12 x 1.25 mm, M14 x 1.25 mm, M18 x 1.5 mm)		2set	1set

S. No	Tool	Specification	Image	CBT	Non-CBT
45	Fuel Pressure Tester Kit	BETOOLL Fuel Pressure Test Kit - Fuel Pressure Gauge - 0-100PSI Fuel Injection Pump Pressure Tester Gauge Kit for Car Case Size: Length: ~12 inches (305 mm) Width: ~9 inches (230 mm) Height: ~3 inches (76 mm)		2set	1set
46	Siccor Lift	Bay Max 12K Specifications: Capacity: 12,000 lbs (5.4 tons) Overall Length: 242-3/4 inches (6,166 mm) Deck Length: 185 inches (4,700 mm) Overall Width: 91-1/2 inches (2,324 mm)		1	1
47	Universal Efi Diagnostic Scanner	Launch X431 PRO 5 OBD2 Scanner Diagnostic Tool Support ECU Programming 2025 Launch new exclusive released automotive diagnosis toll		2	1
48	Key Programmer Device	Launch X431 IMMO Key Programmer Remote Maker with 1 Super Chip and 4 Smart Key		1	1
49	All Data Electrical Software Programmer Device	ALLDATA DIAGNOSTICS 22.00cm x 20.00cm x 20.00cm		1	1

S. No	Tool	Specification	Image	CBT	Non-CBT
50	Iprog Programmer	Aramox IPROG Pro V87 ECU Programmer Package Dimensions 26.7 x 19.5 x 8.4 cm; 970 g		1	1
51	Safety Shoes	Safe toe M-8356RB SBP SRC Electrical Hazard EH & Heat Resistant HRO High Ankle Safety Shoes		25 pairs	25 pairs
52	Safety Goggles	INGCO HSG02 Safety Goggles 16Pcs/Box Handyman		25 pairs	25 pairs
53	Overall Apron (Dangri)	Cotton Safety Dangri Suits		25 pairs	25 pairs
54	Dotted Hand Gloves	Gloves BLUE Dotted for Bikers & Winter season		25 pairs	25 pairs
55	Respirator	3M 6800 Plus 2 Filter Reusable Full Face Mask Respirator		5piece	3piece
56	Safety Helmet	Uniba Polycarbonate Yellow Air Ventilated Safety Helmets		25 pairs	25 pairs
57	Star Allen Key Set	Harden 18Pcs Long Hex & Torx Key Wrench Set 540618 18Pcs Long Hex & Torx Key Wrench Set xHex key wrench size range: 1.5, 2, 2.5, 3, 4, 5, 6, 8, 10mm xTorx key wrench size range: T10, T15, T20, T25, T27, T30, T40, T45, T50		3-5set	2

S. No	Tool	Specification	Image	CBT	Non-CBT
58	Allen Key Set	Total Hex Keys Set Alloy Steel Package Dimensions 31.3 x 18.9 x 3.2 cm; 1.05 kg		3-5set	2
59	Complete Security Alarm System Trainer	Liuhawk Car Security Alarm System With Immobilizer KeyFit For:12V battery car, van, pickup truck, SUV, etc., general purpose products Operating Voltage:12V±3V		3set	2set
60	Air Compressor	Pacific Ranger Large Size Electric Industrial Air Compressor Approx. measurements: 6'L x 45.5"H x 28"D Max. pressure: 175 PSI - Power: 600V, 3-phase, hardwire connectivity		1	1
61	Impact Screwdriver Set	1/2" Manual Hand Impact Driver Set Extractor-12 PCS Impact Screwdriver S2 Steel Much More Durable Disengage Rusted Fasteners or Frozen Bolts Manual Reversible Impact Driver Set 7.8"L x 2.5"W x 2"H		3-5set	2
62	Funnel Set	Plastic Funnel Set Premium 4 Piece Funnel Set Red plastic Package Dimensions 16.26 x 11.68 x 9.4 cm; 27.21 g		3-5set	2
63	Exhaust Gas Analyzer	NOVA Plus – Portable Emission Analyzer Industrial combustion and emissions tuning, troubleshooting or compliance reporting Simultaneous measurement up to 8 gases		1	1

S. No	Tool	Specification	Image	CBT	Non-CBT
64	Injector Cleaner and Testing Machine	Launch - CNC-603A 2 in 1 Automatic Injector Cleaner & Tester Power: AC110V-127V, 50Hz/60Hz 3Amax or AC220V-230V, 50Hz/60Hz 1.5Amax		1	1
65	Spark Plug Test Machine	LUTIFIX Automotive Spark Plug Tester, 110V Spark Plug Detector Diagnostic Tool Diagnostic Scanner Vehicle Detector for 12V Vehicles		1	1
66	Bench Vice	Wadfow WBV1A04 Bench Vice body cast iron Size200mm (8")		6piece	3piece
67	Catch Pan (Tray) Set	Oil-resistant plastic, 3–5 tray sizes, 5L+ capacity each		12piece	8piece
68	Battery Tester	KZYEE KS21 Battery Tester 12V 100-2000 CCA Auto Car Battery Load Test Digital Analyzer for Detect Health Faults, Cranking and Charging System		1	1
69	Battery Jump Starter	10Ah 12V Portable Power Station & Emergency Jump Start With 300PSI Air Compressor (Petrol 2500cc/Diesel 2000cc)		1	1
70	Hack Frame	Polished Metal Hacksaw Frame, For Cutting Item Length: 300 millimeters, Item Weight: 0.3615 kilograms		12piece	8piece

S. No	Tool	Specification	Image	CBT	Non-CBT
71	Efi Electrical Trainer	Battery ECU complete wiring with ecu, all connector, ignition switch with immobilizer system relay box, fuse box, Sensor, actuator, fuse box, diagnoses connector		1	1
72	Fire Extinguisher	Dry powder/CO ₂ type, 4–9 kg capacity, ISI certified		8	4
73	4-Stroke Engine Cycle Trainer Model	4 Stroke Single Cylinder Petrol Engine The section model represents a real 4-stroke petrol engine, cut in every detail, carburetor, ignition, etc. The suction-exhaust-transfer channels are especially highlighted so as to make it easy to learn the cycle.		1	1
74	2-Stroke Engine Cycle Trainer Model	Two-stroke engine, cross-section model Cross-section models on bases Every model includes a flywheel, for illustrating valve control and fuel injection, with built-in lamps Base dimensions: approx. 205x210 mm, height: approx. 350 mm		1	1
75	Carburetor Engine Trainer Model	Engine Structure Training Equipment (Carburetor Type): Educational model featuring a 4-cylinder gasoline engine with carburetor for hands-on training.		2	1
76	Diesel Engine Trainer Model	Diesel Engine Bench – Trainer (TIER 4F) Consu Lab's Diesel Engine Training Bench HV-950-C4.4 is a fully functioning Caterpillar C4.4 Diesel Engine bench mounted on a mobile steel stand		2	1

S. No	Tool	Specification	Image	CBT	Non-CBT
77	Diesel Engine (Half-Cut) Vehicle Trainer	Diesel engine vehicle trainer is a valuable educational tool used in automotive training program (Diesel engine with gear box, complete electrical wiring, fuel system, turbo charger, lubrication system, cooling system, exhaust system		1	1
78	Efi Engine Trainer Model	2018-2014 Corolla 1.8L engine trainer with AC The Consu Lab EM-140C-TYO2A engine trainer is a fully functional recycled engine mounted on a mobile stand. (All sensors, All actuators, Speed meter, Fuse box, relay box, with diagnoses connector starting condition		1	1
79	Efi Half-Cut Vehicle Trainer Model	Efi half cut vehicle trainer part specifying model Engine Control Unit (ECU) ECU Electronic control Unit Relay Box Fuse Box Ignition Switch Sensors		1	1
80	Automotive Back camera Model Trainer	Car Sideview Backup Camera System Dimensions (L x W x T) (218 x 149 x 82mm)		1	1
81	Oscilloscope	PicoScope Automotive Oscilloscopes Multiple Measurements Voltage Current Pressure Noise and Vibration 12-bit oscilloscope 16x better than 8 bits		1	1

S. No	Tool	Specification	Image	CBT	Non-CBT
82	Automatic Transmission Cutaway Trainer Model	RWD 5 Speed Automatic Transmission Cutaway 4 Gears and Reverse Casing Torque converter Oil pump Stationary plate clutch Rotary plate clutch Planetary gear train Hydraulic circuit valve Centrifugal regulator		1	1
83	Alternator Cut Way Trainer Model	ALTERNATOR SINGLE-FLOW COOLING cutaway Educational Trainer		1	1
84	Automatic Transaxle Cutaway Trainer Model	Automatic Transmission Educational Trainer Specifications Dimensions: 900 x 600 x 1000 mm (35.43 x 23.62 x 39.37 in) Transmission type: rear-drive, 4 Forward gears + Reverse Components: torque converter, oil pump, stationary plate clutch, rotary plate clutch, planetary gear train, hydraulic circuit valve, centrifugal regulator		1	1
85	Overall Computer System with Projector	Desktop PC (i5/i7, 8GB+ RAM, 500GB SSD), HD projector (3000+ lumens, HDMI/VGA input), screen		1	1
86	Digital multi-Meter	UNI-T UT33D+ Plus Digital Multimeter 1 x UNI-T UT33D+ Digital Multimeter 2 x Test Leads 1 x Protective Cover		5piece	3piece

S. No	Tool	Specification	Image	CBT	Non-CBT
87	Voltage Tester	AWBLIN Automotive Test Light - Digital LED Circuit Tester Package Dimensions 10.16 x 2.44 x 1.65 inches (25.8 x 6.2 x 4.2 cm); 7.41 ounces (210.07 grams)		5piece	3piece
88	Automotive Electrical Trainer	Wiring System Trainer, Electronic Ignition		1	1
89	Digital Battery Tester	LAUNCH BST-860S Battery Tester with Printer, 12V 24V Dimensions: 29 x 23 x 9.4 cm; 500 g		5piece	3piece
90	Battery Booster Jump Starter	Car Battery Jump Starter - FlyAuto 1800 Amp 12V 24V Heavy Duty Product Dimensions (L x W x H) 11.5"D x 8.5"W x 14.5"H (29.2 x 21.6 x 36.8 cm)		1set	1set
91	Soldering Station	TOAUTO DS882 2-in-1 Soldering Station & Hot Air Rework Kit Package Dimensions 11.22 x 8.9 x 4.92 inches		2set	1set
92	Battery Jumper Led	NOONE Jumper Cables for Car Battery Starting Dead or Weak Batteries 10-Feet 10-Gauge		2set	1set

S. No	Tool	Specification	Image	CBT	Non-CBT
93	Automotive Self-starter Cut Way Model	Starter Motor for Cars Cutaway Operated: Manually Equipment Layout: On Base Dimensions: 25 x 20 x 20(h) cm Net Weight: 6 kg Gross Weight: 10 kg		1set	1set
94	HVAC Diagnostic Kit (Guage Set)	BACOENG AC Vacuum Pump and Gauge Set		3set	2set
95	Panel Remover Tool	Premium 19-Piece Trim Removal Tool Kit for Easy Car Panel Door Audio Trim Removal Product Dimensions 13 x 9 x 2 inches		5set	3set
96	V block Light Duty	V-Blocks Dual-Vee Magnetic Product Model V Block Width(mm) 63 Depth(mm) 75 Height(mm) 75		3	2
97	Ecu Module Various Vehicle	Different type Automotive ECU for training purpose Automotive Engine Control Module, Electronic Control Unit (ECM/ECU) Die-casting Aluminum		10piece	8piece
98	Insulated Rubber Gloves	Novax Novaxc00orn – Rubber Insulating Gloves (size 8,9,10,11)		25 pairs	25 pairs

S. No	Tool	Specification	Image	CBT	Non-CBT
99	Ac Gas Installation & Recovery Machine Launch	Smart R134a Refrigerant Gas Charging Machine Car Single package size: 73X67X136 cm	 A red and black portable refrigerant charging machine on a four-wheeled cart. A red banner on the top left of the machine reads "2024 NEWEST".	1	1
100	A/C Manifold Gauge Set	R134a Aluminum Manifold Gauge Set - 60" Hose (3) 60" Nylon Barrier Hoses – SAE Approved (1) Blow-Molded Case	 A circular arrangement of various components of an A/C manifold gauge set, including gauges, hoses, and fittings.	3set	2set

Lab 05: Consumable Materials of Auto Electrician

(For Class Of 15 To 25 Students)

SR	Tool	Specification	Image	CBT	Non-CBT
1	12 Volt Battery S50	12 VOLT BATTERY S50		5	3
2	12 Volt Battery S100	12 VOLT BATTERY S100		5	3
3	Silicon	GMSA		24	20
4	Grease	Caltex		10	8
5	Elfi	GMSA 20gm		1 box	1 box
6	Magic Super Glue	GMSA 4gm		1 box	1 box
7	Insulation Tape	Local (as per sample engine)		3 dozen	2 dozen

SR	Tool	Specification	Image	CBT	Non-CBT
8	Petrol Pipe Small, Medium Clips	Local (as per sample engine)		3 dozen	2 dozen
9	Spark Plug Ngk 2 M.D Japan	M.D Japan (as per sample)		1 box	1 box
10	High Tension Leads	M.D Japan (as per sample)		2box	2box
11	Wiring Harness Tape	Electrical Tape Heat Resistant Harness Length: 15M Width: 9/15/19/25mm		2 dozen	1 dozen
12	Anti Rust Spray	DK Anti-Rust Lubricant Spray 100ML DK		1 dozen	8piece
13	Ac Gas R134A	Best Cool Air Auto A/C Refrigerant Gas Specification 13.6kg/30lb		1 cylinder	1 cylinder
14	Ac Compressor Oil	HFC 134A Car Air Conditioner Compressor Oil Features and benefits Uniquely formulated for best performance. High-quality base oil and additives used.		1 dozen	8piece

SR	Tool	Specification	Image	CBT	Non-CBT
15	Battery Wire Black Color	Local (as per sample engine)		50 ft	30ft
16	Battery Wire Red Color	Local (as per sample engine)		50 ft	30ft
17	Nut	8mm,10mm, 12mm, 14mm, 17mm, 19mm Local		3box	3box
18	Battery Terminal	Local (as per sample engine)		1 box	1 box
19	Horn Thimble	Local (as per sample engine)		1 box	1 box
20	Automotive Wire Size 2Mm	Auto Cable 2mm, For Wiring Plain Copper Conductors		3pack	3pack
21	Automotive Wire Size 4Mm	Auto Cable 4MM, For Wiring Plain Copper Conductors		3pack	3pack
22	Automotive Wire Size 6Mm	Auto Cable 6mm, For Wiring Plain Copper Conductors		3pack	3pack

SR	Tool	Specification	Image	CBT	Non-CBT
23	Automotive Wire Size 10Mm	Auto Cable 10MM, For Wiring Plain Copper Conductors		3pack	3pack
24	Ignition Switch	Local (as per sample engine)		6	4
25	Self Starter Motor Carbon Bush	Local (as per sample engine)		1dozen	1dozen
26	Alternator Carbon Bush	Local (as per sample engine)		1dozen	1dozen
27	Thimble Eye Type	Local (as per sample engine)		2box	2box
28	Thimble Detachable	Local (as per sample engine)		2box	2box
29	Soldering Wire	Local (as per sample engine)		2box	2box

SR	Tool	Specification	Image	CBT	Non-CBT
30	Soldering Flux	Local (as per sample engine)		1 box	1 box
31	Lamp 12V Dc Headlight 55 Watt Double Filament	Local (as per sample engine)		2 dozen	1 dozen
32	Lamp Blub	12V DC INDICATOR 21WATT Local (as per sample engine)		2 dozen	1 dozen
33	Lamp Blub	12 V DC BRAKE LIGHT 21 WATT Local (as per sample engine)		2 dozen	1 dozen
34	Dashboard	LIGHT 12V 5WATT Local (as per sample engine)		2 dozen	1 dozen
35	10Mm No Bolt	Local 1 Inch Length (as per sample engine)		2 box	2 box
36	12Mm No Bolt	12 NO BOLT 1 Inch Length Local (as per sample engine)		2 box	2 box

SR	Tool	Specification	Image	CBT	Non-CBT
37	12Mm No Bolt	12 NO BOLT 2 Inch Length Local (as per sample engine)		2box	2box
38	14Mm No Bolt	14 NO BOLT 2 Inch Length Local (as per sample engine)		2box	2box
39	14 Mm No Bolt	14 NO BOLT 3 INCH LENGTH Local (as per sample engine)		2box	2box
40	17 Mm No Bolt	17 NO BOLT 4 INCH LENGTH Local (as per sample engine)		2box	2box
41	Plane Washer	8mm,10mm,12mm,14mm,17 mmLocal		1 box	1 box
42	Fuse Blade Type Small	Blade type small (10AMP, 15AMP,20AMP,30AMP Local (as per sample engine)		2pack	2pack
42	Fuse Blade Type Normal	Blade type normal (10AMP, 15AMP,20AMP,30AMP Local (as per sample engine)		2pack	2pack

Lab 06: Tools and Equipment of Advance Auto Mechanic (Automotive Mechatronics)

(For Class Of 15 To 25 Students)

S. No	Tool	Specification	Image	CBT	Non-CBT
1	Iron Tool Trolley	162 Pcs Tool Chest Set Chest part: With 7 pcs drawers Overall size : 765 x 465 x 812 mm Over all with casters size : 765 x 465 x 976 mm		03	2
2	Open-End Spanner	Sizes: 6–32mm 12pcs double open-end spanner set Size: 6-32mm 6x7mm to 30X32mm chrome vanadium steel (Cr-V steel)		3-5 set	2
3	Box Spanner	DURATECH Offset Box Wrench Set, Metric, 9-Piece, 6-32mm, 75-Degree, Chrome Vanadium Steel Construction with Rolling Pouch		3-5 set	2
4	Combination Spanner	23Pcs Combination Spanner Set X Manufactured from high quality carbon steel with a bright chrome plated finish X Size range: 6mm, to 32mm		3-5set	2
5	Ratchet Spanner	Sidchrome 12 Piece 467 Pro Series Metric Ratchet Spanner Set – Metric Sizes: 8-19mm Built from durable Chrome Vanadium steel		3-5set	2

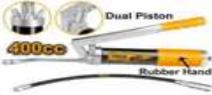
S. No	Tool	Specification	Image	CBT	Non-CBT
6	Flex-Head Ratchet Wrench	TR TOOL ROCK 12pcs Flex Head Ratcheting Wrench Set- Metric Sizes: 8-19mm Ratchet Combination Wrenches CrV Gear Spanner Set		3-5set	2
7	Adjustable Wrench	CRAFTSMAN Adjustable Wrench, 6", 8", 12" Alloy Steel		5piece	3piece
8	Standard Adjustable Wrench	Proffered Standard Adjustable Wrench, Phosphate Finish, 6 to 12"		5piece	3piece
9	Pipe Wrench	Jetech size 36-inch Heavy Duty Straight Pipe Wrench, Adjustable Aluminum Plumber with Floating Hook Jaw and I-Beam Handle, Red		5piece	3piece
10	Line Wrench Kit	Includes 7 wrenches (sizes 13mm, to 19mm), catering to a wide range of sizes. High-Quality Chrome		3-5set	2
11	Adjustable Digital Torque Wrench	Tapaha Tools Adjustable Digital Torque Wrench 19.9 to 99.5 ft-lbs (27-135 N-m) Torque Range, 5-27 mm Adjustable Jaw, LED and Buzzer Notification, Preset Memory		5	3
12	Socket Set (Metric)	Normal 6 to 32mm (6point) Stalwart 40-Piece Ratcheting Socket Wrench Set with Metric and Standard Sockets, Torque Handle, and Insulated Driver - Durable Hard-Plastic Case		3-5set	2

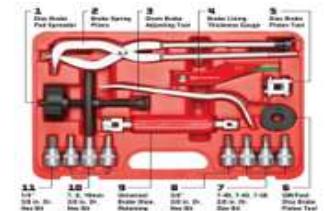
S. No	Tool	Specification	Image	CBT	Non-CBT
13	Socket Set (Metric)	Standard Metric Socket Set (12-point) 6mm to 32mm Material Chrome Vanadium Steel (Cr-V)	A red and black open toolbox containing a set of metric sockets and a wrench.	3-5set	2
14	Socket Set (Metric)	Deep socket 6 to 32mm (6point) 1/2" Drive Deep Impact Socket Set, 38-Piece Socket Set SAE 3/8 to 1-1/4 inch and Metric 10-32mm chrome vanadium steel with a black phosphate finish	A black open toolbox containing a set of deep impact sockets and a wrench.	3-5set	2
15	Socket Set (Metric)	LACK ROBOT 32-Piece 1/2" Drive Metric Socket Set, 6-Point(8mm-32mm) 12-Point(10mm-19mm), Socket Ratchet Wrench Mechanic Tool Set, CR-V Steel	A black open toolbox containing a set of metric sockets and a wrench.	3-5set	2
16	Socket Set 3/4"	Normal 6 to 12mm (12point) KATSU 3/4" Socket Set 21 Pieces, 19-50mm Metric 12 Point Ratchet Wrench 24 Teeth in Steel Case	A red open toolbox containing a set of 3/4" sockets and a ratchet wrench.	3-5set	2
17	Ratchets (1/4", 3/8", 1/2", And 3/4" Drives)	1/4" drive deep sockets in: 6mm,7mm,8mm,10mm,12mm Chromium-vanadium Steel	Three ratchet wrenches of different sizes (1/4", 3/8", 1/2") with deep sockets attached.	3-5set	2
18	Impact Wrench (Electrical)	Takuoo Cordless 1/2-inch Brushless Impact Wrench, Max Torque (1000N.m) 740Ft-lbs Electric Impact Gun w/2x 4000mAh Battery, Charger & 6 Sockets	A yellow and black cordless impact wrench with its components: a yellow carrying case, two batteries, a charger, and six sockets.	3-5set	2
19	Air Impact Wrench	INGCO AIW12562 1/2" Drive Air Impact Wrench	A black and silver air impact wrench with three black sockets.	3-5set	2

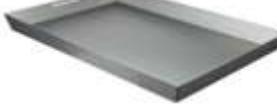
S. No	Tool	Specification	Image	CBT	Non-CBT
20	Air Flexible Hose Pipe	Compressed Air Spiral Hose WENTS Coiled air Hose 6 m with Connector High Pressure Flexible Hose Spiral Duct red		5piece	3piece
21	Impact Sockets Set	SP Tools SP20320 Imp. socket Set 1/2 Drive 15 Piece Long Series – Metric		3-5set	2
22	Rubber Insert Spark Plug Socket	Magnetic or rubber insert to hold plugs (14mm, 15mm, 16mm, 21mm) Power built 2 Piece Magnetic Spark Plug Socket Set - 641870		5piece	3piece
23	Locking Pliers (Vice Grips)	Deli Curved Jaw Locking Pliers Material high-quality chrome vanadium steel (Cr-V) or high carbon steel 5 inch (125 mm) 7 inch (175 mm) 10 inch (250 mm)		3-5set	2
24	Needle-Nose Pliers	SHOWY 3pcs Jewelry Pliers Wire Cutter Pliers Needle Nose Pliers for Home Jewelry Making Wire Wrapping DIY Crafts (Size 5 inches 125 mm) PVC or rubber-coated		3-5set	2
25	Slip-Joint Pliers	Insulated Slip-Joint Pliers - Straight Jaws Chrome-vanadium steel body. Size (Common Lengths): 6 inch (150 mm) 8 inch (200 mm) Chrome Vanadium Steel (Cr-V)		3-5set	2
26	Diagonal Wire Cutter	Dykes 4.5" Side Cutter Diagonal Wire Cutting Pliers Diagonal Wire Cutter Side Cutting Pliers (wire cutter)		3-5set	2

S. No	Tool	Specification	Image	CBT	Non-CBT
27	Bolt Cutting Plier	Bolt Cutter Pliers Set, Industrial 14" Bolt Cutter + Mini 8" Bolt Cutter + 8" High Leverage Cable Cutter with Easily Cut Locks Chromium vanadium steel		3-5set	2
28	Snap-Ring Pliers Set	INGCO 4pcs Snap Ring Pliers Set 7 Inch Circlip Pliers Set Heavy Duty Internal/External Pliers Kit Straight/Bent Jaw Size: Each plier is 7 inches (180mm) in length Material: Constructed from carbon steel for durability and strength		3-5set	2
29	Hose Clamp Pliers	Hose Clamp Pliers Swivel Flat Band Flat-Band Ring-Type Car Water Pipe Removal Tool Size: Length: Typically, these pliers measure approximately 8 to 9 inches (200 to 230 mm) high-quality carbon steel		3-5set	2
30	Flathead Screw Driver Set	Kobalt-18-Piece-Plastic-Handle-Magnetic-Assorted-Screwdriver-Set 1/8-inch x 2-1/2 inch 3/16-inch x 4 inch 3/16-inch x 6 inch (Cabinet) 1/4-inch x 4 inch 1/4-inch x 6 inch 5/16-inch x 8 inch 3/8-inch x 8 inch		5-10 set	8
31	Phillips Screw Driver Set	STANLEY Cushion Grip Screwdriver PH0 x 60 mm PH1 x 75 mm PH2 x 100 mm PH3 x 150 mm		5-10 set	8
32	Trox Socket Set	DURATECH 23-Piece Torx Bit Socket and External Torx Socket Set, 8 Star Sockets, 7 Female E-Torx		3-5set	2

S. No	Tool	Specification	Image	CBT	Non-CBT
33	Precision Screwdrivers	Miniature flat/Torx/Phillips sets Precision Screwdriver Set 32 pieces SL1.0, SL1.5, SL2.0, SL2.5, SL3.0, SL3.5, SL4.0 mm PH000, PH0, PH0, PH1 PZ0, PZ1 T4, T5, T6, T7, T8, T9, T10, T15, T20 H0.7, H0.9, H1.3, H1.5, H2.0, H2.5, H3.0, H4.0 mm Tip Extension Support ergonomic handle screwdriver Chrome Vanadium Steel (Cr-V)		3-5set	2
34	Ball-Peen Hammers	hammer with a rounded end on the other side of the normal flat face. features 2.5lb head sizes between 8-48 oz.		5piece	3piece
35	Rubber Mallets	Rubber Hammer 16OZ 24OZ		5piece	3piece
36	Brass Hammers	Brass Hammer Sledge, 2lbs, Fiber glass Handle		5piece	3piece
37	Dead Blow Hammers	65mm Dead-Blow Hammer Made of Nitrile rubber		5piece	3piece
38	Piston Ring Compressors Tool Set	TOPTUL Piston Ring Compressor 53-125 mm		3-5set	2
39	T Handle Set	Autoly T Handle Wrench Set 8mm, 10mm, 12mm, 14mm Hex Socket Key Wrench Set Chrome Vanadium Steel		3-5set	2

S. No	Tool	Specification	Image	CBT	Non-CBT
40	Feeler Gauges	Mitutoyo 184-307S Thickness Feeler Gage Set, Straight Leaves, 0.03 - 0.5mm Thickness, 100mm Length		3-5set	2
41	Magnetic Trays	Made of premium Stainless Steel Ideal tray for storing small parts, tools, nuts, bolts, screws and etc.		10 pieces	8piece
42	Grease Guns	Lever or pistol-grip, 6000 PSI Grease gun Material : 1.2mm Steel tube + Aluminum-Cast		2piece	1piece
43	Funnel Set	Plastic Funnel Set Premium 4 Piece Funnel Set Red Plastic Package Dimensions 16.26 x 11.68 x 9.4 cm; 27.21 g		5set	3set
44	Oil Drain Pan	Flo Tool 42003MI 16-Quart Drain Container		5piece	3piece
45	Oil Filter Wrench	QIBAOACR Belt Type Oil Filter Wrench Car Multi-Purpose Adjustable Filter removal Wrench Auto Engine Tools Motorcycle Repair Belt Wrench for Filter and Pipe 8 Inch Blue		3piece	2piece
46	Gear Oil Gun	NATIONAL SPENCER 321 5G GEAR OIL PUMP vinyl hose with curved nozzle Buna N seal		2set	1set
47	Pick And Hook Sets	Wadflow Pick and Hook Set - 4 Piece Set		3-5set	2

S. No	Tool	Specification	Image	CBT	Non-CBT
48	Panel Remover Tool	Premium 19-Piece Trim Removal Tool Kit for Easy Car Panel Door Audio Trim Removal Product Dimensions 13 x 9 x 2 inches		5set	3set
49	Magnetic Pickup Tools	GUTIMORE Flexible Magnetic Pickup Tool, 25" Long Bend-It Magnet Snake Pickup, Bendable Magnetic Pickup 2LB		5piece	3piece
50	V-block Light Duty	V-Blocks Dual-Vee Magnetic Product Model V Block Width(mm) 63 Depth(mm) 75 Height(mm) 75		3	2
51	Brake Service Tool Kit	Power built Brake Service Set, 15 Piece, Remove Springs, Adjust Vehicle Drum Brakes, Spread Disc Pads		2set	1set
52	Star Allen Key Set	Harden 18Pcs Long Hex & Torx Key Wrench Set 540618 18Pcs Long Hex & Torx Key Wrench Set xHex key wrench size range: 1.5, 2, 2.5, 3, 4, 5, 6, 8, 10mm xTorx key wrench size range: T10, T15, T20, T25, T27, T30, T40, T45, T50		5set	3set

S. No	Tool	Specification	Image	CBT	Non-CBT
53	Clutch Aligning Tool	Clutch Alignment / Aligning Tool Fully Universal Metal - Metric 11 - 25mm & SAE sizes (1" and 1-1/8") f		2set	1set
54	Allen Key Set	Total Hex Keys Set Alloy Steel Package Dimensions 31.3 x 18.9 x 3.2 cm; 1.05 kg		5set	3set
55	Ball Joint Puller	Hazet 1779-1 Universal Ball Joint Puller Product Dimensions 6.5 x 3.99 x 8 cm; 45.36 g		2	1
56	Brake Caliper Piston Puller	Blue Spot Tools Brake Disc Caliper Piston Spreader Tool Blue Spot 3-in-1 Brake and Pipe Bender (6mm, 8mm, 10mm)		5	3
57	Catch Pan (Tray) Set	Oil-resistant plastic, 3-5 tray sizes, 5L+ capacity each		12piece	8piece
58	Hake Frame	Polished Metal Hacksaw Frame, For Cutting Item Length: 300 millimeters, Item Weight: 0.3615 kilograms		12piece	8piece
59	Impact Screwdriver Set	1/2" Manual Hand Impact Driver Set Extractor-12 PCS Impact Screwdriver S2 Steel Much More Durable Disengage Rusted Fasteners or Frozen Bolts Manual Reversible Impact Driver Set 7.8" L x 2.5" W x 2" H		5set	3set

S. No	Tool	Specification	Image	CBT	Non-CBT
60	Digital Vernier Caliper	Electronics Digital Vernier caliper 0-150mm Size:245 x 80 x 12mm		5set	3set
61	Electric Angle Grinder	Electric Angle Grinder Tool 4-12 inch, 8.5A 12000RPM with 115mm 3pcs Grinding Wheel Package Dimensions 13.78 x 6.5 x 4.72 inches		1	1
62	Electric Drill Machine	DEWALT 6401-10A Electric Drill 10mm Model: 6401-10A No-load Speed: 0-2500 RPM		3set	2set
63	Pedestal Drill Machine	Drilling Machine with Pedestal Type Max. drilling capacity (Iron/steel) Pedestal Drill Machine: A floor-mounted drilling machine (approx. 1000x600x1700 mm) used for precise vertical drilling in metal, wood, or plastic, featuring adjustable table height and variable speed control		1	1
64	Portable Welding Machine	S7 200Amp ARC Stick Welder for Beginners - 110V with Welding Rod Tools Product Dimensions 12 x 8 x 9 inches		1	1
65	Portable R Gas Welding Station	Premium Quality British Made Equipment Everything you need apart from the oxy-acetylene cylinders Available with or without portable gas cylinder trolley Ideal for refrigeration engineers etc.		1	1

S. No	Tool	Specification	Image	CBT	Non-CBT
66	Cooling System Pressure Tester	28PCS Universal Radiator Pressure Tester & Vacuum Type Cooling System Kit Material: High-Quality Aluminum, Rubber, Plastic Suitcase Dimension: 23 "(L) x 18.9"(W) x 4.3"(H) Coolant Pipe Length: 59"(L)		2set	1set
67	Engine Compression Tester (Petrol Engine)	Compression Tester Kit 0-300 PSI Petrol Gas Engine Cylinder Pressure Gauge Automotive Tool for Motorcycle Car Truck From compatibility: vier Adapter (M10 x 1.0 mm, M12 x 1.25 mm, M14 x 1.25 mm, M18 x 1.5 mm)		2set	1set
68	Engine Compression Tester (Diesel Engine)	17pc Professional Diesel Engine Cylinder Compression Tester Tool Set Kit 1000PSI Case Size: Length: ~14 to 16 inches (355 to 406 mm) Width: ~10 to 12 inches (254 to 305 mm) Height: ~3 to 4 inches (76 to 102 mm)		2set	1set
69	Fuel Pressure Tester Kit	BETOOLL Fuel Pressure Test Kit - Fuel Pressure Gauge - 0-100PSI Fuel Injection Pump Pressure Tester Gauge Kit for Car Case Size: Length: ~12 inches (305 mm) Width: ~9 inches (230 mm) Height: ~3 inches (76 mm)		2set	1set
70	Engine Oil Pressure Tester	Oil Pressure Tester Tool, Oil Pressure Gauge kit, 0-140 PSI Pressure Test Diagnostic Tools, Engine Oil Pressure Tester Tool kit, for car Truck (Blue)Case Size: Length: ~12 inches (305 mm) Width: ~9 inches (230 mm) Height: ~3 inches (76 mm)		2set	1set

S. No	Tool	Specification	Image	CBT	Non-CBT
71	Digital multi-Meter	UNI-T UT33D+ Plus Digital Multimeter 1 x UNI-T UT33D+ Digital Multimeter 2 x Test Leads 1 x Protective Cover		5piece	3piece
72	Voltage Tester	AWBLIN Automotive Test Light - Digital LED Circuit Tester Package Dimensions 10.16 x 2.44 x 1.65 inches (25.8 x 6.2 x 4.2 cm); 7.41 ounces (210.07 grams)		5piece	3piece
73	Digital Battery Tester	LAUNCH BST-860S Battery Tester with Printer, 12V 24V Dimensions: 29 x 23 x 9.4 cm; 500 g		5piece	3piece
74	Battery Booster Jump Starter	Car Battery Jump Starter - Fly Auto 1800 Amp 12V 24V Heavy Duty Product Dimensions (L x W x H) 11.5"D x 8.5"W x 14.5"H (29.2 x 21.6 x 36.8 cm)		1set	1set
75	Soldering Station	TOAUTO DS882 2-in-1 Soldering Station & Hot Air Rework Kit Package Dimensions 11.22 x 8.9 x 4.92 inches		2set	1set
76	Battery Jumper Led	NOONE Jumper Cables for Car Battery Starting Dead or Weak Batteries 10-Feet 10-Gauge		2set	1set
77	Universal Efi Diagnostic Scanner	Launch X431 PRO 5 OBD2 Scanner Diagnostic Tool Support ECU Programming 2025 Launch new exclusive released automotive diagnosis toll		2	1

S. No	Tool	Specification	Image	CBT	Non-CBT
78	Safety Shoes	Safe toe M-8356RB SBP SRC Electrical Hazard EH & Heat Resistant HRO High Ankle Safety Shoes		25 pairs	25 pairs
79	Safety Goggles	INGCO HSG02 Safety Goggles 16Pcs/Box Handyman		25 pairs	25 pairs
80	Overall Apron (Dangri)	Cotton Safety Dangri Suits		25 pairs	25 pairs
81	Dotted Hand Gloves	Gloves BLUE Dotted for Bikers & Winter season		25 pairs	25 pairs
82	Insulated Rubber Gloves	NOVAX NOVAXC00ORN – RUBBER INSULATING GLOVES (size 8,9,10,11)		25 pairs	25 pairs
83	Respirator	3M 6800 Plus 2 Filter Reusable Full Face Mask Respirator		5piece	3piece
84	Safety Helmet	Un breakable Polycarbonate Yellow Air Ventilated Safety Helmets		25 pairs	25 pairs
85	Fire Extinguisher	Dry powder/CO ₂ type, 4–9 kg capacity, ISI certified		8	5
86	Hydraulic Floor Jacks	GEC Low Profile Hydraulic Floor Jack 3.5 Ton 2 Pump 105-520mm Height		2piece	1piece
87	Jack Stands	BIG RED T46202 Torin Steel Jack Stands: 6 Ton (12,000 lb) Capacity, Red		6	3piece

S. No	Tool	Specification	Image	CBT	Non-CBT
88	Transmission Jacks	Dragway Tools 1000 LB 2 Stage Hydraulic Transmission Jack Lift Hoist with Foot Pump		1 piece	1 piece
89	Garage Creeper	PM PERFORMOTOR 48" Folding 2 in 1 Rolling Z Creeper Alloy Steel		5 piece	3 piece
90	Wheel Balancing Machine	BFH1000 Wheel Balancer Mount the wheel with patented Power Clamp Dimensions: Width: 64 inches (1626 mm) Depth: 64 inches (1626 mm) Height: 64 inches (1626 mm) Wheel Compatibility: Diameter Range: 8 to 30 inches Width Capacity: Up to 21 inches Maximum Assembly Weight: 154 lbs (70 kg)		1 no	1
91	Wheel Alignment Machine	Aston Wheel Alignment Machine Alignment Machine Wheel Alignment System Wheel aligner. 3D Fully Automatic. Dual Screens. Estimated Dimensions: Length: ~64 to 72 inches (1625 to 1830 mm) Width: ~72 to 80 inches (1830 to 2032 mm) Height: ~72 to 80 inches (1830 to 2032 mm)		1 no	1
92	Siccar Lift	Bay Max 12K Specifications: Capacity: 12,000 lbs (5.4 tons) Overall Length: 242-3/4 inches (6,166 mm) Deck Length: 185 inches (4,700 mm) Overall Width: 91-1/2 inches (2,324 mm)		1 no	1
93	Two Post Lift	Stainless Steel Two Post Car Service Lifts, 4-6 tons Max Lifting Height 1830 mm Min Lowering Height 110 mm Width Between Two Posts 2800 mm		1	1

S. No	Tool	Specification	Image	CBT	Non-CBT
94	Air Compressor	Pacific Ranger Large Size Electric Industrial Air Compressor Approx. measurements: 6'L x 45. 5"H x 28"D Max. pressure: 175 PSI - Power: 600V, 3-phase, hardwire connectivity		1	1
95	Digital Tire Pressure Guage	Astro AI Digital Tire Pressure Gauge with Inflator Material Stainless Steel, Brass Item dimensions L x W x H 8.26 x 3.15 x 3.34 inches		2set	1set
96	Automotive Tire Inflator	G5 Rainproof Gasoline Station Wall Mounted Automatic Digital Tyre Air Inflator Dimensions (Height x Width x Depth) 290mmx230mmx120mm 11.4"x9.1"x4.7"		1	1
97	Tire Changer Machine	Tire Changer Machine 74"w x 44"d x 81" h Footprint 110-175 psi, 15 Air Motor		1	1
98	Digital Wheel Tread Thickness Gauge	Digital Tire Tread Depth Gauge 0 - 25.4 (0 - 1") Auto-on and 5 minutes auto-off, extending battery life		5set	3set
99	Car Paint Coating Thickness Detector Tester	Car Paint Coating Thickness Tester Pen Material: Metal Package Contents: 1 x Paint Thickness Tester		03Set	3set
100	Ac Leak Detector	The detector de fugas de refrigerant detects [HCFCs: R22, R123, R124, R502 etc.] [HFCs: R134a, R404a, R125, R438a etc.] [HFOs: R1234 etc.] [HCs (Hydrocarbon): R290, R600a etc. 5%hydrogen/95% nitrogen Racer Gas		1	1

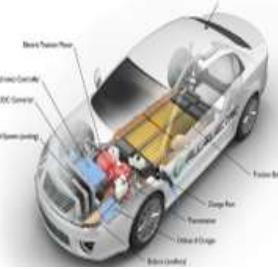
S. No	Tool	Specification	Image	CBT	Non-CBT
101	Ac Gas Installation & Recovery Machine Launch	Smart R134a Refrigerant Gas Charging Machine Car Single package size: 73X67X136 cm		1	1
102	A/C Manifold Guage Set	R134a Aluminum Manifold Gauge Set - 60" Hose(3) 60" Nylon Barrier Hoses – SAE Approved (1) Blow-Molded Case		3set	2set
103	Exhaust Gas Analyzer	NOVA Plus – Portable Emission Analyzer Industrial combustion and emissions tuning, trouble-shooting or compliance reporting Simultaneous measurement up to 8 gases		1	1
104	Injector Cleaner and Testing Machine	Launch - CNC-603A 2 in 1 Automatic Injector Cleaner & Tester Power: AC110V-127V, 50Hz/60Hz 3Amax or AC220V-230V, 50Hz/60Hz 1.5Amax		1	1
105	Spark Plug Test Machine	LUTIFIX Automotive Spark Plug Tester, 110V Spark Plug Detector Diagnostic Tool Diagnostic Scanner Vehicle Detector for 12V Vehicles		1	1
106	Bench Vice	Wadflow WBV1A04 Bench Vice body cast iron Size200mm (8")		6piece	3piece
107	Brake Bleeder Kit	WNZ Brake Bleeder kit Master Cylinder Bleeder Kit Pressure Brake Bleeder Tool (5L) Product Dimensions 15 x 10 x 13 inches		1	1

S. No	Tool	Specification	Image	CBT	Non-CBT
108	Hydraulic Press	Capacity Stroke Space Interval Bed Rail Opening Post Opening Base Width Height Ship Weight 50 Tons 7" 5-1/2" 9" 32" 44" 68" 672 lbs.		1	1
109	Overall Computer System with Projector	Desktop PC (i5/i7, 8GB+ RAM, 500GB SSD), HD projector (3000+ lumens, HDMI/VGA input), screen		1	1
110	Oscilloscope	Pico Scope Automotive Oscilloscopes Multiple Measurements Voltage Current Pressure Noise and Vibration 12-bit oscilloscope 16x better than 8 bits		1	1
111	Automotive Back camera Model Trainer	Car Sideview Backup Camera System Dimensions (L x W x T) (218 x 149 x 82mm)		1	1
112	Battery Tester	KZYEE KS21 Battery Tester 12V 100-2000 CCA Auto Car Battery Load Test Digital Analyzer for Detect Health Faults, Cranking and Charging System		1	1
113	Battery Jump Starter	10Ah 12V Portable Power Station & Emergency Jump Start With 300PSI Air Compressor (Petrol 2500cc/Diesel 2000cc)		1	1
114	Complete Security Alarm System Trainer	Liuhawk Car Security Alarm System with Immobilizer Key Fit For:12V battery car, van, pickup truck, SUV, etc., general purpose products Operating Voltage:12V±3V		3set	2set

S. No	Tool	Specification	Image	CBT	Non-CBT
115	Key Programmer Device	Launch X431 IMMO Key Programmer Remote Maker with 1 Super Chip and 4 Smart Key		1	1
116	All Data Electrical Software Programmer Device	Alldata Diagnostics 22.00cm x 20.00cm x 20.00cm		1	1
117	Iprog Programmer	Aramox IPROG Pro V87 ECU Programmer Package Dimensions 26.7 x 19.5 x 8.4 cm; 970 g		1	1
118	Universal Efi Diagnostic Scanner	Launch X431 PRO 5 OBD2 Scanner Diagnostic Tool Support ECU Programming 2025 Launch new exclusive released automotive diagnosis toll		2	1
119	4-Stroke Engine Cycle Trainer Model	4 Stroke Single Cylinder Petrol Engine The section model represents a real 4-stroke petrol engine, cut in every detail, carburetor, ignition, etc. The suction-exhaust-transfer channels are especially highlighted so as to make it easy to learn the cycle.		1	1
120	2-Stroke Engine Cycle Trainer Model	Two-stroke engine, cross-section model Cross-section models on bases Every model includes a flywheel, for illustrating valve control and fuel injection, with built-in lamps Base dimensions: approx. 205x210 mm, height: approx. 350 mm		1	1

S. No	Tool	Specification	Image	CBT	Non-CBT
121	Carburetor Engine Trainer Model	Engine Structure Training Equipment (Carburetor Type): Educational model featuring a 4-cylinder gasoline engine with carburetor for hands-on training.		2	1
122	Diesel Engine Trainer Model	Diesel Engine Bench – Trainer (TIER 4F) ConsuLab's Diesel Engine Training Bench HV-950-C4.4 is a fully functioning Caterpillar C4.4 Diesel Engine bench mounted on a mobile steel stand		2	1
123	Diesel Engine (Half-Cut) Vehicle Trainer	Diesel engine vehicle trainer is a valuable educational tool used in automotive training program (Diesel engine with gear box, complete electrical wiring, fuel system, turbo charger, lubrication system, cooling system, exhaust system		1	1
124	Efi Engine Trainer Model	2018-2014 Corolla 1.8L engine trainer with AC The ConsuLab EM-140C-TYO2A engine trainer is a fully functional recycled engine mounted on a mobile stand. (All sensors, All actuators, Speed meter, Fuse box, relay box, with diagnoses connector starting condition		2	1
125	Efi Half-Cut Vehicle Trainer Model	Efi half cut vehicle trainer part specifying model Engine Control Unit (ECU) ECU Electronic control Unit Relay Box Fuse Box Ignition Switch Sensors		1	1
126	Turbocharger Trainer Model	The Turbine Engine Trainer is a compact, educational model with a DC motor-driven compressor, providing over 12 kg of thrust for training purposes.		1	1

S. No	Tool	Specification	Image	CBT	Non-CBT
127	Power Window Trainer Model	Power Window System Single package size: 90X60X130 cm		1	1
128	Distributor Contact Breaker Point Trainer Model	The trainer consists of an Ignition coil, distributor, set of spark plugs & 12 V DC power supply		1	1
129	Electronic Distributor Trainer Model	Electronic Ignition Trainer: A compact (approx. 800×500×400 mm) training unit with ECU, coils, spark plugs, and RPM control to demonstrate modern automotive ignition systems.		1	1
130	Automotive Air-Cooling Trainer Model	Automotive Air Conditioning Trainer Includes monitor to displaying the wiring diagram, thermometer, and measurement of pressure refrigerant Front panel to help students see what they are controlling Measurement depend on a vehicle		1	1
131	Magnetic Torch	LED Work Light, CRI 95+, Rechargeable Magnetic Base Emergency Light for Reading, Camping, Garage, Car Engines Repair and All Tight Spots Material: PC, rubber & Aluminum		5piece	3piece
132	Extension Lead	Extension lead (Size:50M)		1	1

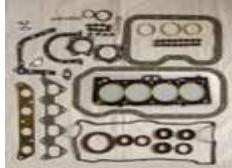
S. No	Tool	Specification	Image	CBT	Non-CBT
133	Electric Vehicle Trainer Model	witch Electric Vehicle Training System is designed to be built, tested, driven, and then disassembled class after class for real-world EV Training Lithium-Ion, Electric Vehicle		1	1
134	Solar Power Electric Trainer Model	Solar Power Electric Passenger Car with Air Conditioning Max Recharge Meal age 110-130km Specification 3450/1550/1630		1	1
135	Hybrid In plug Vehicle Half Cut Trainer Model	Educationally functioning parallel-type hybrid system running a 1.5L gas engine and nickel hydrogen motor powered by two external set of 120v electric motors. Content Highlight 1. Hybrid Engine 2. Power inverter system 3. Electric propulsion sensing system 4. Hybrid vehicle braking system 5. hybrid battery pack with all ECU		1	1
136	Manual Transmission Cutaway Trainer Model	5 Speed Gearbox with Clutch Cutaway Educational Trainer automotive training equipment for teaching and training purposes of automotive technology Operated: Manually (Through a Crank Handle) Equipment Layout: On Stand with Wheels Dimensions: 90 x 60 x 100(h) cm		1	1

S. No	Tool	Specification	Image	CBT	Non-CBT
137	Automatic Transmission Cutaway Trainer Model	RWD 5 Speed Automatic Transmission Cutaway 4 Gears and Reverse Casing Torque converter Oil pump Stationary plate clutch Rotary plate clutch Planetary gear train Hydraulic circuit valve Centrifugal regulator		1	1
138	Manual Transaxle Cutaway Trainer Model	FWD 5 Speed Manual Gearbox with Differential Cutaway Operated: Manually (Through a Crank Handle) Equipment Layout: On Stand with Wheels Dimensions: 60 x 60 x 60(h) cm Net Weight: 40 kg Gross Weight: 60 kg		1	1
139	Automatic Transaxle Cutaway Trainer Model	Automatic Transmission Educational Trainer Specifications Dimensions: 900 x 600 x 1000 mm (35.43 x 23.62 x 39.37 in) Transmission type: rear-drive, 4 Forward gears + Reverse Components: torque converter, oil pump, stationary plate clutch, rotary plate clutch, planetary gear train, hydraulic circuit valve, centrifugal regulator		1	1
140	Automotive Electrical Trainer	Wiring System Trainer, Electronic Ignition		1	1
141	Automotive Self-starter Cut Way Model	Starter Motor for Cars Cutaway Operated: Manually Equipment Layout: On Base Dimensions: 25 x 20 x 20(h) cm Net Weight: 6 kg Gross Weight: 10 kg		1set	1set
142	Alternator Cut Way Trainer Model	ALTERNATOR SINGLE-FLOW COOLING cutaway Educational Trainer		1	1

S. No	Tool	Specification	Image	CBT	Non-CBT
143	Efi Electrical Trainer	Battery ECU complete wiring with ecu, all connector, ignition switch with immobilizer system relay box, fuse box, Sensor, actuator, fuse box, diagnoses connector		1	1
144	Ecu Module of Various Vehicle	Different type Automotive ECU for training purpose Automotive Engine Control Module, Electronic Control Unit (ECM/ECU) Die-casting Aluminum		10piece	8piece
145	Kabli Engine for Practice	1500 cc Engine: A 4-stroke, 3- or 4-cylinder petrol engine, liquid-cooled and fuel-injected, producing approx. 60–100 HP, commonly used in compact cars.		1	1
146	Diesel Engine for Practice	1000 cc Diesel Engine: A 3-cylinder, turbocharged, common rail direct injection engine producing around 50–75 HP and 120–190 Nm torque		1	1
147	Efi Engine for Practice	EFI 1500cc Engine: A 4-cylinder, 1.5L petrol engine with Electronic Fuel Injection (EFI), producing around 90–120 HP and 130–150 Nm torque, known for fuel efficiency and used in cars like the Toyota Vios		1	1

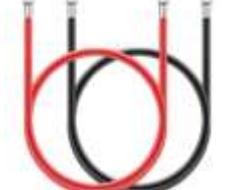
Lab 06: Consumable Materials of Advance Auto Mechanic

(For Class Of 15 To 25 Students)

S. No	Tool	Specification	Image	CBT	Non-CBT
1	Engine Oil (Havoline 20W-50)	HAVOLINE		30 liters	25 liters
2	Carburetor Cleaner	NASA		10	8
3	Wd 40	WD-40		10	8
4	Tappet Cover Gasket as Per Sample Engine	M.D Japan		12	10
5	Complete Head Gasket	M.D Japan		12	10
6	Only Head Gasket (Double Size) As Per Sample Engine	M.D Japan		6	3
7	Petrol Fuel	Local		100 liters	80 liters
8	Diesel Fuel	Local		100 liters	80 liters

S. No	Tool	Specification	Image	CBT	Non-CBT
9	Kerosine Oil	Local		100 liters	80 liters
10	Diesel Engine Oil (Delo 400Mgx)	CALTEX DELO 400MGX		30 liters	25 liters
11	12 Volt Battery S50	12 VOLT BATTERY S50		5	3
12	12 Volt Battery S100	12 VOLT BATTERY S100		5	3
13	Silicon	GMSA		24	20
14	Grease	Caltex		10	8
15	Elfi	GMSA 20gm		1 box	1 box

S. No	Tool	Specification	Image	CBT	Non-CBT
16	Magic Super Glue	GMSA 4gm		1 box	1 box
17	Insulation Tape	Local (as per sample engine)		3 dozen	2 dozen
18	Air Filter (As Per Sample)	Local (as per sample)		5	3
19	Petrol Pipe	Local (as per sample)		50 ft	30ft
20	Petrol Pipe Small, Medium Clips	Local (as per sample engine)		3 dozen	2 dozen
21	Water Hose Pipe S,M	Local (as per sample)		10	8
22	Spark Plug Ngk 2 M.D Japan	M.D Japan (as per sample)		1 box	1 box

S. No	Tool	Specification	Image	CBT	Non-CBT
23	High Tension Leads	M.D Japan (as per sample)		2box	2box
24	Distributor Cap	M.D Japan (as per sample)		2	2
25	Piston Ring Set Size 25	M.D Japan (as per sample)		10 pack	8 pack
26	Carburetor Complete Gasket Kit	M.D Japan (as per sample)		5 pack	3 pack
27	Brake Oil Fuel Big Bottle	GUARD DOT 3 500CC		2 dozen	2 dozen
28	Battery Wire Black Color	Local (as per sample engine)		50 ft	30 ft
29	Battery Wire Red Color	Local (as per sample engine)		50 ft	30 ft

S. No	Tool	Specification	Image	CBT	Non-CBT
30	Bolt Size Kabli 17,10,14,19	Local (as per sample engine)		1 box	1 box
31	Battery Terminal	Local (as per sample engine)		1 box	1 box
32	Horn Thimble	Local (as per sample engine)		1 box	1 box
33	Plane Washer	8mm, 10mm, 12mm, 14mm, 17mm Local		1 box	1 box
34	Engine Coolant	AISIN		20 liters	15 liters
35	Oil Filter as Per Sample Engine	GUARD		12	10
36	Power Steering Fluid	GUARD		1 box	1 box

S. No	Tool	Specification	Image	CBT	Non-CBT
37	Dangri	Kabli		25	25
38	Transmission Fluid	ZIC		20 liters	15 liters
39	Transmission Oil	ZIC		20 liters	15 liters
40	Wire Thimble Male & Female	Local (as per sample engine)		1 box	1 box
41	Nut	8mm, 10mm, 12mm, 14mm, 17mm, 19mm Local		3box	3box
42	10 No Bolt 1 Inch Length	Local (as per sample engine)		2box	2box
43	12 No Bolt 1 Inch Length	Local (as per sample engine)		2box	2box

S. No	Tool	Specification	Image	CBT	Non-CBT
44	12 No Bolt 2 Inch Length	Local (as per sample engine)		2box	2box
45	14 No Bolt 2 Inch Length	Local (as per sample engine)		2box	2box
46	14 No Bolt 3 Inch Length	Local (as per sample engine)		2box	2box
47	17 No Bolt 4 Inch Length	Local (as per sample engine)		2box	2box
48	Battery Wire Positive Pole	Local (as per sample engine)		2box	2box
49	Diesel Fuel Pipe	Local (as per sample engine)		50 ft	30ft
50	Water Heater Hose Clamp Medium Size	Local (as per sample engine)		1 box	1 box

S. No	Tool	Specification	Image	CBT	Non-CBT
51	Cb Point as Per Sample Engine	DANSO Local (as per sample engine)		6	3
52	Generator Belt	Local (as per sample engine)		3	2
53	Cotton Waste	Local (as per sample engine)		100kg	80kg
54	Automotive Dotted Gloves	Local (as per sample engine)		25	25
55	Embrey Paper (0,2,4,6 Size)	Local (as per sample engine)		5pack	4pack
56	Thrust Bearing Standard Size (As Per Sample Engine)	Local (as per sample engine)		2pack	2pack
57	Big End Shell Bearing Standard Size (As Per Sample Engine)	Local (as per sample engine)		2pack	2pack

S. No	Tool	Specification	Image	CBT	Non-CBT
58	Fuel Filter	Local (as per sample engine)		12	10
59	Main Oil Seal (As Per Sample Engine)	Local (as per sample engine)		6	5
60	Crankshaft Oil Seal (As Per Sample Engine)	Local (as per sample engine)		6	5
61	Timing Belt (As Per Sample Engine)	Local (as per sample engine)		3	2
62	Petrol Pipe Small,Medium Clips	Local (as per sample engine)		3 dozen	2dozen
63	Wiring Harness Tape	Electrical Tape Heat Resistant Harness Length: 15M Width: 9/15/19/25mm		2dozen	1dozen
64	Anti Rust Spray	DK Anti-Rust Lubricant Spray 100ML DK		1dozen	8piece

S. No	Tool	Specification	Image	CBT	Non-CBT
65	Ac Gas R134A	Best Cool Air Auto A/C Refrigerant Gas Specification 13.6kg/30lb		1cyclinder	1cyclinder
66	Ac Compressor Oil	HFC 134A Car Air Conditioner Compressor Oil Features and benefits Uniquely formulated for best performance. High-quality base oil and additives used.		1dozen	8piece
67	Automotive Wire Size 2Mm	Auto Cable 2mm, For Wiring Plain Copper Conductors		3pack	3pack
68	Automotive Wire Size 4Mm	Auto Cable 4MM, For Wiring Plain Copper Conductors		3pack	3pack
69	Automotive Wire Size 6Mm	Auto Cable 6mm, For Wiring Plain Copper Conductors		3pack	3pack
70	Automotive Wire Size 10Mm	Auto Cable 10MM, For Wiring Plain Copper Conductors		3pack	3pack
71	Ignition Switch	Local (as per sample engine)		6	4
72	Self-Starter Motor Carbon Bush	Local (as per sample engine)		1dozen	1dozen

S. No	Tool	Specification	Image	CBT	Non-CBT
73	Alternator Carbon Bush	Local (as per sample engine)		1dozen	1dozen
74	Thimble Eye Type	Local (as per sample engine)		2box	2box
75	Thimble Detachable	Local (as per sample engine)		2box	2box
76	Soldering Wire	Local (as per sample engine)		2box	2box
77	Soldering Flux	Local (as per sample engine)		1 box	1 box
78	Lamp 12V Dc Headlight 55 Watt Double Filament	Local (as per sample engine)		2dozen	1dozen
79	Lamp Blub	12V DC INDICATOR 21WATT Local (as per sample engine)		2dozen	1dozen

S. No	Tool	Specification	Image	CBT	Non-CBT
80	Lamp Blub	12 V DC BRAKE LIGHT 21 WATT Local (as per sample engine)		2dozen	1dozen
81	Dashboard	LIGHT 12V 5WATT Local (as per sample engine)		2dozen	1dozen
82	Fuse Blade Type Small	Blade type small (10 AMP,15AMP,20AMP,30AMP Local (as per sample engine)		2pack	2pack
83	Fuse Blade Type Normal	Blade type normal (10 AMP, 15 AMP,20AMP,30AMP Local (as per sample engine)		2pack	2pack
84	Crankshaft Position Sensor	Crankshaft Position Sensor – Detects the position and rotational speed of the crankshaft to control ignition timing and fuel injection; typically operates on 5V or 12V, outputs digital signal (square wave or sine wave).		5	3
85	Camshaft Position Sensor	Camshaft Position Sensor – Monitors the position of the camshaft to synchronize fuel injection and ignition timing; typically operates on 5V or 12V, outputs digital signal (square wave or sine wave).		5	3
86	Knock Sensor	Knock Sensor – Detects engine knock or vibration to adjust ignition timing; typically operates on 12V, outputs analog voltage or frequency signal to ECU.		5	3

S. No	Tool	Specification	Image	CBT	Non-CBT
87	Air Flow Sensor	Air Flow Sensor (Mass Air Flow Sensor - MAF) – Measures the volume and density of air entering the engine for fuel-air mixture control; typically operates on 5V, outputs analog voltage (0.5–4.5V) or digital signal.		5	3
88	Engine Coolant Temperature Sensor	Engine Coolant Temperature Sensor – Monitors the temperature of engine coolant; typically uses thermistor technology, operating on 5V or 12V systems, outputs varying resistance or voltage (e.g., 0.5–4.5V).		5	3
89	Oxygen Sensor	Oxygen Sensor (O2 Sensor) – Measures the level of oxygen in exhaust gases to optimize fuel mixture; operates on 12V, outputs analog voltage (0.1–0.9V) or digital signal.		5	3
90	Tps Sensor	TPS Sensor (Throttle Position Sensor) – Measures the position of the throttle valve; typically operates on 5V, outputs analog voltage (0.5–4.5V) to ECU.		5	3
91	Abs Sensor	ABS Sensor – Monitors wheel speed for anti-lock braking; typically, hall-effect or magneto-resistive type; operates on 5V or 12V with digital (square wave) output.		5	3
92	Parking Sensor	Parking Sensor – Ultrasonic sensor detects obstacles by emitting sound waves; operates on 12V, outputs distance data via analog, PWM, or digital (CAN/LIN) signals.		5	3
93	Rain Sensor	Rain Sensor – Detects moisture on windshield to automate wiper operation; uses infrared reflection; typically powered by 12V and communicates via LIN or CAN.		5	3

S. No	Tool	Specification	Image	CBT	Non-CBT
94	Vehicle Speed Sensor	Vehicle Speed Sensor – Detects rotational speed of wheels or transmission, sending digital pulses to ECU; operates on 5V or 12V systems.		5	3
95	Oil Pressure Sensor	Oil Pressure Sensor – Detects engine oil pressure; outputs analog (e.g., 0.5–4.5V) or digital signal to ECU; operates on 5V or 12V systems.		5	3
96	Oil Level Sensor	Oil Level Sensor – Monitors engine oil level in real-time; typically operates on 5V or 12V systems with analog or digital output to the ECU.		5	3
97	Steering Clock Sensor	Steering Clock Sensor – Measures steering wheel angle and rotation; vital for ESC, EPS, and airbag timing systems; operates typically on 5V or 12V systems.		5	3
98	Glow Plug Diesel Engine	12V Glow Plug Timer – Controls pre-heating duration of glow plugs in diesel engines, typically 5–30 seconds, operating at 12V DC.		12	10
99	Glow Plug Timer	Glow Plug Timer (12V) – Measurement Specification: Operating Voltage: 12V DC, typically $\pm 10\%$ (10.8V – 13.2V)		3	2
100	Immobilizer Antenna Coil Assembly	(as per sample)		2	1

6. Hospitality Sector

Lab 01: Tools and Equipment of Professional Chef

(FOR CLASS OF 15 to 25 Students)

Sr.#	Items	Item Description	Image	CBT	Non-CBT
1.	Knife Set	<p>Knife Set Professional Kitchen Knives, stainless steel blades Durable bolster, high quality Ergonomic handle, minimum spine thickness of chef knife of the set: 18 swg, Dishwasher safe Standard Dimensions: Chef's knife:11.5 inches long Serrated utility knife:11.5 inches long Filleting knife:9.5 inches long Santuko knife: 8.5 inches long Bird's peak paring knife: 7 inches long Sharpening steel: 10.5 inches long and scissor with knife stand</p>		5	3
2.	Cleaver/ Chopper	<p>Cleaver/ Chopper Stainless steel blade, Durable Bolster, high quality Ergonomic handle, minimum spine thickness of blade 16 swg. Standard Size: LxW: Min 10 x2.5 inches.</p>		5	3
3.	Butter Knife/ Palette knife	<p>Butter Knife/ Palette knife Stainless steel material, straight blade frosting knife with wooden handle, Minimum blade thickness 20 swg, length Min 14 inches and width 3 cm.</p>		5	3
4.	Icing Spatula	<p>Icing Spatula Stainless steel angled spatula for frosting and smoothing/icing on cakes, minimum 15 inch long with thickness of min 22 swg with blade width 4 cm.</p>		5	3
5.	Bread Slicing Knife	<p>Bread Slicing Knife Stainless steel material, serrated blade, wooden</p>		5	3

Sr.#	Items	Item Description	Image	CBT	Non-CBT
		handle, spine thickness min 20 swg, Standard length size: Min 16 inch long.			
6.	Grater	Grater Multi-functional Grater, main body material Stainless Steel with handle, grip for surfaces. Minimum Dimensions: 8.5-inch height and 4-inch bottom diameter.		5	3
7.	Measuring Spoons and Cups set	Measuring Spoons and Cups set Material stainless steel, minimum thickness 20 swg, set of 5 measurement spoons and set of 4 measurement cups		5	3
8.	Measuring Jug	Measuring Jug Minimum capacity 1500 millimeter		5	3
9.	Chopping Board Set (Large)	Chopping Board Set (Large) Material: Acrylic Polypropylene plastic (food grade plastic), color coded Standard dimensions: 60x40x2 cm Set of 5 Colors: whiter, green, yellow, red, blue. Dishwasher-safe		5	3
10.	Chopping Board Set (Small)	Chopping Board Set (Small) Material: Acrylic Polypropylene plastic (food grade plastic), color coded Standard dimensions: 48x35x1 cm Set of 5 Colors: whiter, green, yellow, red, blue. Dishwasher-safe		5	3
11.	GN Pan 1/1	GN Pan 1/1		5	3

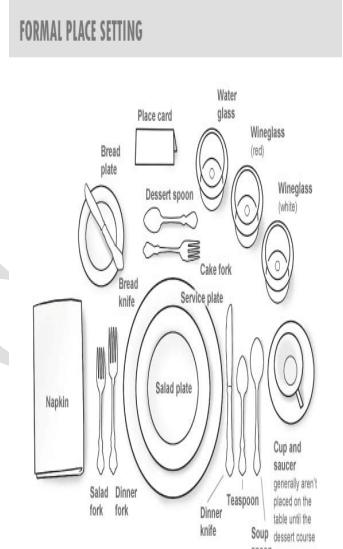
Sr.#	Items	Item Description	Image	CBT	Non-CBT
		Material stainless steel draw deep pan with lid, Standard dimensions: 21x13x2.5 inches, minimum thickness 21 swg			
12.	GN Pan 1/2	GN Pan 1/2 Material stainless steel draw deep pan with lid, Standard dimensions: 10.5x13x2.5 inches, minimum thickness 21 swg		5	3
13.	Karahi Large	Karahi Large Material aluminum, polished, round bottom with two side handles, lid with handle, Standard size: upside diameter 32 cm, minimum thickness 14 swg		5	3
14.	Karahi Small	Karahi Small Material aluminum, polished, round bottom with two side handles, lid with handle, Standard size: upside diameter 27 cm, minimum thickness 14 swg		5	3
15.	Bowls Large	Bowls Large Material Stainless steel minimum 24 swg, shining finish. Standard size: Upper end diameter 12 inches		5	3
16.	Bowls Medium	Bowls Medium Material Stainless steel minimum 24 swg, shining finish. Standard size: Upper end diameter 8 inches		5	3
17.	Bowls Small	Bowls Small Material Stainless steel minimum 24 swg, shining finish.		5	3

Sr.#	Items	Item Description	Image	CBT	Non-CBT
		Standard size: Upper end diameter 4 inches			
18.	Tin Openers	Tin Openers Stainless Steel Tin Can Cutter, heavy duty, minimum 6 inches long, handle partially covered with Bakelite.		5	3
19.	Vegetable Peeler	Vegetable Peeler Two-way stainless-steel blade peeler, minimum 6 inches long.		5	3
20.	Potato Masher	Potato Masher Stainless steel potato masher with handle, minimum length 10 inches, minimum thickness 14 swg, durable.		5	3
21.	Baking trays	Baking trays Material aluminum, high quality smooth finish, Standard size: 18x13 inches, Oven Safe.		5	3
22.	Bread Mould Small	Bread Mould Small Material: mild steel, Standard size: dimensions 8x4.5x4 inches, loaf pan with cover		5	3
23.	Bread Mould Large	Bread Mould Large Material: mild steel, minimum dimensions 10x5x5 inches, loaf pan with cover		5	3
24.	Baguette pans	Baguette pans Material: perforated steel, 20 swg, 5 loaves pan, minimum sizes: 22x15x2.15 inches		5	3

Sr.#	Items	Item Description	Image	CBT	Non-CBT
					
25.	Gun Lighter	Gun Lighter Metallic gun lighter to ignite burners, minimum 11 inches long.		5	3
26.	Lemon Squeezer	Lemon Squeezer Material: Stainless Steel, durable with heavy squeezing part and handles, Minimum length 6 inches.		5	3
27.	Ice cream Scoop	Ice cream Scoop Material cast Aluminum, minimum 6.5 inches long		5	3
28.	Pressure Cooker	Pressure Cooker Industrial Aluminum Induction Base Pressure Cooker minimum capacity 11 Liter Body Material: Aluminum, Bottom: Induction bottom Side handle: Heat resistant black Bakelite handle Valve: Safety silicon valve / seal, Thickness: minimum 10 swg, Inner finished: Mirror polished outside & satin polished inside.		5	3
29.	Stainless Steel Sauce Pan	Stainless Steel Sauce Pan Material Stainless Steel, mirror polish outside, satin finish inside, minimum diameter 18 cm, minimum thickness 20 swg, thicker base. Solid handle underneath Bakelite coating. See through lid with Bakelite handle		5	3
30.	Aluminum Sauce Pan Large	Aluminum Sauce Pan Large		5	3

Sr.#	Items	Item Description	Image	CBT	Non-CBT
		Material Aluminum, pans with wooden handle, lid with handle, minimum thickness 14 swg, Standard size: diameter 20 cm.			
31.	Aluminum Sauce Pan Small	Aluminum Sauce Pan Small Material Aluminum, pans with wooden handle, lid with handle, minimum thickness 14 swg, minimum diameter 16 cm		5	3
32.	Aluminum Fry Pan Medium (10-inch diameter)	Aluminum Fry Pan Medium (10-inch diameter) Material: Aluminum with wooden handle, minimum thickness 14 swg, Standard size: diameter 26 cm.		5	3
33.	Non-Stick Fry Pan	Non-Stick Fry Pan Material nonstick coated pans, minimum thickness 12 swg, smooth pan finish, handle made of stainless steel, Standard size: diameter 28 cm		5	3
34.	Non-Stick Cooking Spoon Set	Non-Stick Cooking Spoon Set (Set of 2) Set of 2 high-quality non-stick cooking slotted spoon and longitudinal slotted spatula set, stainless steel handle, smooth finishing, minimum length 12 inches.		5	3
35.	Cooking Pot Small	Cooking Pot Small Material Aluminum, high quality finish, two side handles, lid with handle, Standard size: diameter 32 cm and height 28 cm, minimum thickness 14 swg		5	3
36.	Cooking Pot Large	Cooking Pot Large Material Aluminum, high quality finish, both side handles, lid with handle, Standard size: bottom		5	3

Sr.#	Items	Item Description	Image	CBT	Non-CBT
		diameter 42 cm and height 24 cm, minimum thickness 14 swg			
37.	Steamer	Steamer Material: Stainless Steel, 4 Piece Steamer, Double Storie, mirror polish outside, satin polish inside, minimum thickness 22 swg, Standard size: diameter 30 cm and height 22 cm, Two Bakelite handles to each stories, see through lid with Bakelite handle on top.		5	3
38.	Cast Iron Grill Medium size	Cast Iron Grill Medium size Material cast Iron with high quality coating, minimum thickness 8 swg, rectangular-shaped grill with polished metal handle. Standard size: 35 cm.		5	3
39.	Cutlery (Set)	Cutlery (Set) Stainless steel, magnet free, round edges, mirror polish finish, commercial grade hotel and restaurant quality, minimum gauge 12 swg, all items of the same grade, minimum length of each cutlery item is as below: Sugar Spoon 14cm (8 numbers) Tea Spoon 14cm (36 numbers) Table Spoon 18cm (36 numbers) Table Fork 19cm (36 numbers) Table Knife 20cm (36 numbers) Serving Curry Spoon 22cm (8 numbers) Serving Rice Spoon 22cm (8 numbers)		5	3

Sr.#	Items	Item Description	Image	CBT	Non-CBT
		Rice Spoon 24cm (36 numbers) Soup Ladle 23cm (8 numbers)			
40.	Crockery (Set)	Crockery (Set) Shape round, dishwasher safe, microwave safe, Material: porcelain, hotel and restaurant-ware, solid pattern, color white, all items of the same grade, 48 x 12-inch Platter 48 x 10-inch Dinner Plate 48 X 8 -inch Curry Plate 48 X 8 -inch Quarter Plate 48 x 7-inch BnB/Salad Plate 8 x 7-inch Half Serving Bowl 8 x 14-inch Rice Serving Dish 24 x 4.5-inch Soup Bowl 24 Tea Cup 6 Tea Pot (size(capacity) ~4 cups) 6 Sauce Boat (Lamp) (Length 14 cm x Height 7cm) 24 Saucer for Tea Cup and Soup Bowl 24 X 2.5-inch Ramekin 6 x set Salt, Pepper (each of -oz size) and Tooth Pick Pot 6 Sugar pot with lid (minimum capacity 240 mL) 6 Milk Pot (minimum capacity 240 mL) 24 Soup Spoon		5	3
41.	Fry Jali	Fry Jali Stainless Steel wire strainer with wooden handle, frame wire of minimum 10 swg, Standard size: length 65 cm and diameter 25 cm.		5	3
42.	Stainless Steel Strainer	Stainless Steel Strainer Stainless steel wire strainer with stainless steel cylindrical handle, Standard size: length 40 cm, strainer minimum diameter 15 cm		5	3

Sr.#	Items	Item Description	Image	CBT	Non-CBT
43.	Rice Strainer	Rice Strainer Stainless steel rice strainer, minimum upside diameter 15.5 inches		5	3
44.	Sieve set (Set of 4)	Sieve set (Set of 4) Steel sieves of minimum diameters 27 cm, 24 cm, 19 cm and 5 cm.		5	3
45.	Tea Strainer	Tea Strainer Stainless steel material, minimum sizes length 20 cm and head diameter 8 cm.		5	3
46.	Ladle Strainer	Ladle Strainer Stainless steel wire strainer for pasta boiling. Minimum length 12 inches and minimum strainer dimensions mouth diameter 3 inch and height 4 inches.		5	3
47.	Cake Tin Set	Cake Tin Set Enamelled, loose bottom, good quality smooth finish, durable. Sizes: set of three Mo diameter 22 cm, 24 cm, 6 cm		5	3
48.	Cake Stand	Cake Stand Revolving cake plate made of aluminum (minimum thickness 8 swg), minimum diameter of the plate 12 inches, durable base		5	3
49.	Pizza Pan Medium	Pizza Pan Medium Thick pan coated with nonstick material, Standard size: size of the tapered is pan 9",10", with lid of the same material and wooden liner.		5	3

Sr.#	Items	Item Description	Image	CBT	Non-CBT
50.	Rolling Pin	Rolling Pin Material: Stainless steel with stainless steel handles, minimum length and diameter of rolling pin without handles are minimum 24 cm and 7 cm.		5	3
51.	Tissue Paper Dispenser	Tissue Paper Dispenser Plastic body hygiene tissue paper dispenser, partially see through, minimum dimensions 8x13x3 inches		5	3
52.	Soap Dispenser	Soap Dispenser Push type liquid soap dispenser, plastic body, minimum capacity 500 mL.		5	3
53.	Wire Whisk Small and Large (Set of Two)	Wire Whisk Small and Large (Set of Two) Stainless Steel Material with stainless steel handle, minimum length 14 inches and 18 inches and minimum wire thickness 14 swg.		5	3
54.	Meat Hammer	Meat Hammer Material Aluminum, minimum length 25 cm, block face dimensions 5.5 cm square, two sides meat tenderizer one flat and other with prongs on.		5	3
55.	Wire Brush/Grill Brush	Wire Brush/Grill Brush Steel wire brush for clearing griller, smooth wooden handle, minimum length of brush 11 inches.		5	3
56.	Dust Bin	Dust Bin Material HDPE (High Density Polyethylene), Standing type with pedal and lid cover, Minimum capacity 45 liters, color yellow.		5	3
57.	Egg Cutter	Egg Cutter Material stainless steel, heavy duty		5	3

Sr.#	Items	Item Description	Image	CBT	Non-CBT
					
58.	Bread Basket	Bread Basket Minimum diameter 8.5 inches		5	3
59.	Bakery Tong	Bakery Tong Material: Stainless steel having two handles, one flat handle while other with hooked points to pick bakery products, minimum length 9 inches and handle thickness 18 swg		5	6
60.	Small and Large (Set of Two)	Small and Large (Set of Two) Material: stainless steel, two long plastics coated handles terminating to comb shape picking parts, minimum length 12 inches and 16 inches and thickness 20 swg.		5	3
61.	Multi Lifter/Multi-purpose Spatula	Multi Lifter/Multi-purpose Spatula Stainless steel flat blade spatula, minimum 12 inch long and thickness 20 swg. Minimum blade size: dimensions 13x8 cm.		5	3
62.	Curry Spoon/ Karrchhi	Curry Spoon/ Karrchhi Stainless steel round bowl cooking spoon with easy handle, minimum length 15 inch and thickness 18 swg		5	3
63.	Slotted Spoon/Kafgeer	Slotted Spoon/Kafgeer Stainless steel rice cooking spoon with easy handle, minimum length 16 inch and thickness 18 swg.		5	3
64.		Bakery Scrapers/Spatulas set		5	3

Sr.#	Items	Item Description	Image	CBT	Non-CBT
	Bakery Scrapers/Spatulas set	Silicon scraper for bakery preparations, minimum 11 inches long. Stainless steel scraper for cutting doughs and collecting flour on the table, minimum dimensions 6 x 3 inches with Bakelite handle.			
65.	Wooden Cooking spoon set	Wooden Cooking spoon set Cooking spoon minimum 15 inch long and spatula minimum 15 inch in length		5	3
66.	Fish Slicer/Palta	Fish Slicer/Palta Stainless steel wide flat blade cooking spoon with longitudinal holes in blade, minimum length 16 inch and thickness 18 swg, hook hole at end of the handle to hang.		5	3
67.	Cooking ladle	Cooking ladle Stainless steel handle spoon terminating in a deep bowl, used for liquid foods, minimum length 14 inch and thickness 18 swg,		5	3
68.	Mixing Bowl	Mixing Bowl Material acrylic, minimum diameter 8.5 inches.		5	3
69.	Cutlery Tray	Cutlery Tray Material thick and a bit flexible plastic, 4 portions tray for cutlery items storage		5	3
70.	Service Tray Round	Service Tray Round Non-stick service tray of plastic with tray mat pasted inside to prevent slipping, spilling of beverages. Round shaped with minimum diameter 16 inches		5	3
71.		Service Tray Rectangular		5	3

Sr.#	Items	Item Description	Image	CBT	Non-CBT
	Service Tray Rectangular	Non-stick service tray of plastic with tray mat pasted inside to prevent slipping spilling of beverages. Rectangular shape with minimum dimensions 22x16 inches.			
72.	Sauce Bottle	Sauce Bottle Squeezing sauce bottles, made of plastic, minimum size 16 ounces.		5	3
73.	Plastic Container	Plastic Container Material: food grade Plastic container for food storage, transparent container with colored lid, minimum size 32x21x10 cm.		5	3
74.	Stainless Steel Bucket	Stainless Steel Bucket Material: Stainless steel, bucket with lid and handle, minimum capacity 5 liters.		5	3
75.	Goblet Glass	Goblet Glass High quality Smooth finish glass water goblet, minimum capacity 350 milliliter.		5	3
76.	Plate Rack	Plate Rack Material plastic, storage rack for plates, minimum capacity of racking 24 pairs of plates.		5	3
77.	Vegetable Basket	Vegetable Basket Plastic vegetable basket with minimum sizes 15 x 12 inches.		5	3
78.	Goblet Rack	Goblet Rack Material plastic, storage rack for goblets, minimum		5	3

Sr.#	Items	Item Description	Image	CBT	Non-CBT
		capacity of racking 25 goblets.			
79.	Bakery Glove	Bakery Glove Material: silicon, minimum size 11 inches long and palm width 5 inches.		5	3
80.	Sizzling Dish	Sizzling Dish Wooden body with stainless steel pepper grinder mechanism, minimum size 20 cm height and 5 cm base diameter.		5	3
81.	Muffin Tin	Muffin Tin Enameled 12 tin piece tray, minimum size 38x27 cm, one tin approximately 4 cm dia and 3 cm depth		5	3
82.	Pasta Maker	Pasta Maker Manually operated pasta making machine, minimum length of the roller is 14.5 cm, table top, three sets of stainless-steel rollers, pasta shape, thickness variability operated by side knob		5	3
83.	Upright Freezer	Upright Freezer FC Free, air cooled, upright design, complete Structure, Interior & Exterior in Stainless Steel 201/202, 22 swg, with internal edges for easy sanitation. Electronic Thermostat Control, digital temperature		1	1

Sr.#	Items	Item Description	Image	CBT	Non-CBT
		display, door hinges ensure fast recovery and energy saving, 100% copper coil condenser, easily removable gasket with high quality rubber, minimum capacity 650 liters, R600a gas, minimum insulation thickness 50mm, temperature maintaining -18 ~ -22 degree Celsius . voltage: 220 volts 50 hz. caster brake wheels. User manual, Complete installations, overall min 1 year warranty.			
84.	Upright Refrigerator	Upright Refrigerator CFC Free refrigerant, air cooled, upright design, complete structure, Interior & Exterior in Stainless Steel 201/202, 22 swg, internal edges for easy sanitation, 100% copper coil condenser, Electronic Thermostat Control, R600a gas, digital temperature display, door hinges ensure fast recovery and energy saving, easily removable Gasket with high quality rubber, minimum capacity 650 liters, temperature maintaining between +2 ~ +6 degree Celsius. voltage: 220 volts 50 hz. caster brake wheels. user manual, complete installations and overall min 1 year warranty	 A stainless steel upright refrigerator with two doors. A watermark for 'Red Hot Chilli catering' is visible in the background.	1	1
85.	Dough mixer (10 liters)	Dough mixer (10 liters) Casting body with Stainless steel bowl and attachment, high quality gear system, dough mixer of bowl volume minimum 20 liters. Producing power of minimum 0.75kw, kneading capacity upto 6 to 8 kgs. voltage: 220 volts 50hz. With three agitators: dough arm, beater & wire whip equipped with speed selector level, detachable bowl, Easy to operate & secure bowl locking	 A black dough mixer with a stainless steel bowl and various attachments.	2	2

Sr.#	Items	Item Description	Image	CBT	Non-CBT
		system to ensure safety, user manual, Complete installations and overall min 1 year warranty.			
86.	Panini Grill	Panini Grill Fitted with cast iron platters, constructed of stainless steel with a temperature controller switch that adjust temperature from 50 degree centigrade to 300 degrees centigrade. Including a removable stainless steel oil tray for easy cleaning. Size: 310 x 400 x 220 mm, two-piece grill set of minimum size 21x21 cm, thermostat control, long easy handle of stainless steel with partial plastic or rubber covering, Power: 2.5 kw. voltage: 220v, 50hz. user manual, Complete installations and overall min 1 year warranty.		5	3
87.	Waffle Maker/Iron	Waffle Maker/Iron Main body of Stainless steel 201, 22 swg, single draw head, thermostat control, timer control, high quality shell casted grills. minimum diameter of the head 21 cm, minimum dimensions: 250 x 350 x 260 mm, stainless steel wire handle, minimum voltage: 220 V 50 Hz, power: 1kw, user manual, Complete installations and overall min 1 year warranty		5	3
88.	Meat Mincer	Meat Mincer Stainless steel body, equipped with push button switch, accord with safety non-slip feet. Fixed stainless steel hopper with hand protection detachable feeding tray, 3 blades 3mm, 5mm, 8mm. minimum dimensions: 240 x 430 x 425 mm. 22 number machine volts: 220		2	2

Sr.#	Items	Item Description	Image	CBT	Non-CBT
		volts 50 Hz, power: 1hp. user manual, Complete installations and overall min 1 year warranty.			
89.	Water Boiler/ Tea Urn	Water Boiler/ Tea Urn Capacity: 15 liters minimum, double jacket stainless steel draw bowl, without welding, thermostatic control, voltage: 220 volts 50hz, minimum power: 2000 watts, water tap with on/off light, with lid and handles and min 1 year warranty.		2	2
90.	Microwave Oven	Microwave Oven Minimum specification for microwave is capacity 25 liters, grill function, voltage 220 V, frequency 50 Hz, Microwave output power 900-Watt, grill power 1000-Watt, user manual, Complete installations and overall min 1 year warranty		2	2
91.	Toaster	Toaster Main body of stainless steel, minimum requirements are two slice toaster, voltage 220 V, 50 Hz, power 850-Watt, variable timer levels, user manual, 1 year warranty.		2	2
92.	Blender/Juicer	Blender/Juicer Three in one blending, juicing, grinding, minimum requirements are power 800-Watt, voltage 220 V, 50 Hz, two speeds one pulse, with suction feet to grip on surfaces, minimum jug capacity 1.7 Liters, user manual, 1 year warranty.		2	2
93.	Hand Mixer	Hand Mixer Min power 800-Watt, voltage 220 V, 50 Hz, with a 700 mL jug. Two turbo speeds and two speed levels, blade and rod of stainless material, handle made of plastic with partial stainless-steel plating, user manual, 1 year warranty		5	3

Sr.#	Items	Item Description	Image	CBT	Non-CBT
94.	Chopper	Chopper Min power 500-Watt, shredder, salad cutter function, voltage 220 V, 50 Hz, two safety lock, with suction feet, minimum jug capacity 1.5 liter, two speeds one pulse, user manual, min 1 year warranty		8	4
95.	Sandwich Maker (2 slice)	Sandwich Maker (2 slice) Min Power 750-Watt, voltage 220 V 50 Hz, nonstick grill plates, indicator light, manual lock for safety. user manual, min 1 year warranty		5	3
96.	Weighing Scale	Weighing Scale Steel Platform and plastic body, Readout for Weight & Unit Price, weight and price minimum 5-digit display, total price minimum 6-digit display, minimum tray size 13 x 9 inches, dual display of readouts, Fuse Protected for Safety, Rechargeable Battery. Capacity 200 gram to 35 kg, e=d= 2-gram, Complete installations and min 1 year warranty.		2	2
97.	Food Thermometer	Food Thermometer Digital probe food thermometer, battery operated, minimum Temperature Range display, min 1 year warranty.		5	3
98.	Washing Sink Double Pot	Washing Sink Double Pot		1	1

Sr.#	Items	Item Description	Image	CBT	Non-CBT
		Stainless Steel 201 / 202, 18 swg washing sink. Stand alone, minimum dimensions: 24x30x35 inches, brass mixer with lever operate stainless steel neck (including tap water filter) flexible medium size mixer and splash back of 4" on the top, minimum bowl sizes: 18 x 18 x 10 inch with imported stainless-steel coupling, adjustable legs feet, lever operated long neck stainless steel water tab, drain piping, Complete installations and min 1 year warranty			
99.	Patty Maker	Patty Maker Aluminum die cast body, patty making plate (minimum diameter 4 inches) of stainless steel, ability to adjust thickness of patty. Easy lift up and down system with long handle, Table model		4	2
100.	French Fries Cutter	French Fries Cutter Main body parts of die cast Aluminum, table model, cutter with stainless steel cutting blades, stainless rod assembling with stainless steel wing nuts, minimum blade dimensions 8.8 x8.8 cm minimum, vegetable feeding part of stainless steel minimum 10 inches long, easy grip handle, three cutting blades of 8mm, 10mm, 12mm, min 1 year warranty.		4	2
101.	Wall Shelf	Wall Shelf Stainless steel 201 / 202, 18 swg, size 66" x 12" with wall brackets with 2 inch back splash. Complete installations, one year warranty. Four out of total eight shelves have hooks on frontal side to hang spoons. frontal lower inward sides with		5	3

Sr.#	Items	Item Description	Image	CBT	Non-CBT
		stainless steel hooks to hang spoons after each six inches lengthwise			
102.	Working Table (Large)	Working Table (Large) Stainless steel 201 / 202, 18 swg working table, with center half shelf and cabinets followed by splash backs. minimum Sizes: 72" x 24" x 35", No splash back on top, jerk proofing, 3 swing doors adjustable legs, 2" sandwich top with wooden pasting.		5	3
103.	Cooking Range with Baking oven	Cooking Range with Baking oven 6 burner gas operated cooking range in stainless steel 201 / 202, material (swg 18), with built-in baking gas oven, minimum internal sizes: 26x24x12 inches. 6 separate heavy duty smooth finished cast grills, height quality cast nozzles, high quality heat proof knobs or stainless-steel handles. With a splash back exhaust duct, minimum external dimensions: 1050 x 750 x 850 mm. user manual.		3	2
104.	Deep Fryer	Deep Fryer Double tank stand-alone gas operated deep fat fryer, body of stainless steel 201 / 202, swg 18, Each tank with single basket of minimum capacity 2kg, Each tank with minimum 20 liters capacity. Both tanks must have separate ignitions, temperature gauge safety control, timer and automatic control. Producing temperature from 50 to 200 degree Celsius. Minimum external dimensions: 700 x 750 x 850 mm, with two fryer baskets and one zinger basket, user manual.		4	2

Sr.#	Items	Item Description	Image	CBT	Non-CBT
105.	Storage Rack	Storage Rack Stainless steel 201 / 202, 18swg, Stainless Steel Storage Rack Shelves (4 shelves), minimum sizes: 1380 x 500 x 1550 mm, Adjustable rack shelves		5	3
106.	Barbecue Counter	Barbecue Counter Stainless steel body barbecue counter, stainless steel 201 / 202, 18 swg body, double jacket insulated pit, With base shelf and mid shelf, minimum dimensions: 66 x 24 x 40 inches, clayed ceramic tiling in the pit, with exhaust hood and chimney, with bbq rack, with 50 kebab and 50 tikka bars of iron minimum 30 inches in length.		4	2
107.	Portable Pakistani clay tandoor	Portable Pakistani clay tandoor Portable clay tandoor, gas heating, moth diameter 12inch, belly diameter 24 inch, 2inch wall thickness of clay with enforcement rings, stainless steel body with casters, comes with a set of 2 skewers, 6 skewers of tandoori chickens with wooden handle, with cast iron burner, Local Made, Length x width x height 30x30x35 inches		2	2
108.	kitchen hood	Kitchen hoods provide ventilation, removing airborne, grease, smoke, and cooking odors.		1	1

Sr.#	Items	Item Description	Image	CBT	Non-CBT
109.	kitchen ventilation	kitchen ventilation wall mounted kitchen exhaust fan		2	2
110.	fresh air unit in kitchen	Air curtains create a smooth, consistent airflow that separates the kitchen environment from the outside environment.		1	1
111.	Floor mop bucket	With 02 Dry Mops with handles and 02 Wet mops with handles. Material: Plastic with Steel Handle and 4 Wheels Features: Eco-Friendly capacity: 20-L product size: 63x27x67cm pack size: 46.5x27x29cm color: yellow		2	2
112.	Air Tight Jars	Air tight storage glass jar with clip top Use: Food Storage Material: Glass, glass Feature: Eco-Friendly Color: clear Size: 500ml Lid material: clip top		12	6
113.	Salamander Grill (Stainless Steel)	Dimension 880x440x610 mm Controllers 6 Power 10.3Kw Weight 47Kg		1	1
114.	Bain Marie	Mobile Dry Bain Marie with Cabinet (Hot) 4 Bowls Dimension 1060x668x900mm Voltage 220V-240V Max Height of GN Pans 150mm x Hot air circulation heating X With four 1/2 GN pans and one 1/1 GN pan		1	1

Sr.#	Items	Item Description	Image	CBT	Non-CBT
115.	Multimedia projector	Multimedia projects can be used to create engaging and interactive learning experiences		1	1
116.	Computer	Computers can be used for tasks such as word processing, spreadsheets, and presentations.		1	1
117.	Printer	Printers are used to print documents, such as letters, reports, and contracts.		1	1

Lab 02: Tools and Equipment of Baking

(For Class of 15 to 25 Students)

S. No	Name of item	Specification	Images	CBT	Non-CBT
1	Large Mixing Bowl	Material acrylic, minimum diameter 8.5 inches.		5	3
2	Small Bowl	Material Stainless steel minimum 24 swg, shining finish standard size; Upper end diameter 4inches		5	3
3	Whisk	Wishk - 25 CM Stainless Steel Egg Beater Hand Blender Spiral Wire Whisk Mixer for Baking Cooking Tools Kitchen Appliances		12	6
4	Fork	Forks can be made from various materials, including stainless steel, silver, plastic, or wood.		4	2
5	Microwave Oven	Minimum specification for microwave is capacity of 25 liters, grill function, voltage 220 V, frequency 50 Hz, Microwave output power 900-Watt, grill power 1000-Watt, user manual, Complete		1	1
6	Measuring Cups and Spoons	Material stainless steel, minimum thickness 20 swg, set of 5 measurement spoons and set of 4measurement cups		5	3

S. No	Name of item	Specification	Images	CBT	Non-CBT
7	Plastic Wrap	Plastic wrap, also known as cling film or saran wrap, is a thin, flexible plastic sheeting used for wrapping and covering food, surfaces, and other objects		1	1
8	Rolling Pin	Material: Stainless steel with stainless steel handles, minimum length and diameter of rolling pin without handles is minimum 24 cm and 7 cm.		5	3
9	Cookie Cutter or Glass	A cooking cutter, also known as a kitchen cutter or food cutter, is a tool used to cut, slice, or chop food ingredients into desired shapes and sizes.		5	3
10	Baking Sheet	A baking sheet, also known as a cookie sheet or baking tray, is a flat, rectangular metal pan used for baking, roasting, and cooking various foods in the oven		5	3
11	Parchment Paper	Parchment paper, also known as baking paper or parchment, is a type of paper used in baking and cooking to prevent food from sticking to surfaces.		5	3
12	Pastry Brush	A pastry brush is a kitchen tool used to apply egg washes, melted butter, or other toppings to pastry dough, bread, or other baked goods. It's a simple but essential tool for many bakers and cooks.		5	3
13	Oven Mitts	Oven mitts, also known as oven gloves or heat-resistant gloves, are protective hand coverings used to handle hot dishes, pans, and utensils when cooking or baking.		5	3

S. No	Name of item	Specification	Images	CBT	Non-CBT
14	Apron	An apron is a protective garment worn over clothing to prevent stains and splatters while cooking, baking, or engaging in other messy activities. It's a practical and stylish accessory for many home cooks, professional chefs, and crafty individuals.		5	3
15	Griddle or Frying Pan	Small: 6-8 inches (15-20 cm) in diameter, ideal for cooking small meals or snacks. Medium: 8-10 inches (20-25 cm) in diameter, suitable for cooking meals for 2-4 people. - Large: 10-12 inches (25-30 cm) in diameter, ideal for cooking meals for 4-6 people. - Extra Large: 12-14 inches (30-35 cm) in diameter, perfect for cooking large meals or for big families.		5	3
16	Spatula	A spatula is a versatile kitchen tool used for scraping, flipping, and serving food. It's an essential tool for many cooks and bakers. - in size from small (6-8 inches) to large (12-18 inches).		5	3
17	Muffin Tin	Standard: 12 cups, with each cup measuring about 2-3 inches in diameter and 1-2 inches deep. - Mini: 24 cups, with each cup measuring about 1-2 inches in diameter and 1 inch deep. - Jumbo: 6 cups, with each cup measuring about 3-4 inches in diameter and 2-3 inches deep.		5	3
18	Paper Liners	A paper liner is a thin, paper sheet used to line baking pans, cups, or molds. It prevents food from sticking and makes cleanup easier.		5	3

S. No	Name of item	Specification	Images	CBT	Non-CBT
19	Toothpick or Cake Tester	A toothpick or cake tester is a small, pointed tool used to check if baked goods are done. It's a simple but essential tool for many bakers.		5	3
20	Wire Rack	A wire rack is a kitchen tool used for cooling baked goods, such as cakes, cookies, and bread. It's a simple but essential tool for many bakers.		5	3
21	Kitchen Scale	Steel Platform and plastic body, Readout for Weight & Unit Price, weight and price minimum 5-digit display, total price minimum 6-digit display, minimum tray size 13 x 9 inches, dual display		1	1
22	Wooden Spoon or Dough Whisk	A wooden spoon or dough whisk is a kitchen tool used for mixing and blending ingredients, particularly in baking and cooking. It's a versatile and essential tool for many cooks and bakers.		5	3
23	Slotted Spoon or Spider	A slotted spoon or spider is a kitchen tool used for draining liquids from solid foods, such as pasta, vegetables, and meat. It's a versatile and essential tool for many cooks.		5	3
24	9x13 Inch Baking Pan	The pan measures 9 inches in length, 5 inches in width, and typically 2-3 inches in depth. 9x5 inch baking pans are often made from metal, such as aluminum or stainless steel. The pan has straight sides and a flat bottom, making it easy to remove baked goods, or non-stick coated materials.		5	3
25	9x5 Inch Loaf Pan	The pan measures 9 inches in length, 5 inches in width, and typically 2-3 inches in depth. 9x5 inch loaf pans are often made from metal, such as aluminum or		5	3

S. No	Name of item	Specification	Images	CBT	Non-CBT
		stainless steel, or non-stick coated materials- The pan has straight sides and a flat bottom, making it easy to remove baked goods.			
26	Medium Mixing Bowl	Medium mixing bowls typically range in size from 1.5 to 2.5 quarts (1.4 to 2.4 liters), making them perfect for small to medium-sized recipes. They're often made from stainless steel, glass, ceramic, silicone or plastic, each offering its own unique benefits and drawbacks. Medium mixing bowls usually have a rounded bottom and sloping sides, making it easy to mix and blend ingredients.		5	3
27	Serrated Knife	4-6 inches (10-15 cm) - ideal for precision work and small cutting tasks. 6-8 inches (15-20 cm) - suitable for general-purpose cutting and slicing. 10-12 inches (25-30 cm) - perfect for cutting through thicker materials, like large loaves of bread or thick slices of meat. 12-14 inches (30-35 cm) or more - ideal for heavy-duty cutting tasks.		5	3
28	Offset Spatula	6-8 inches (15-20 cm) 1-2 inches (2.5-5 cm) use for Ideal for small bowls, precision work, and delicate tasks.		5	3
29	Microwave-Safe Bowl	4-6 inches (10-15 cm) 2-3 inches (5-7.5 cm) 1-2 cups (250-500 ml) use for Ideal for heating small portions, cooking single servings, or making individual desserts.		5	3

S. No	Name of item	Specification	Images	CBT	Non-CBT
30	Double Boiler or Heatproof Bowl	4-6 inches (10-15 cm)2-3 inches (5-7.5 cm)1-2 cups (250-500 ml) use for Ideal for melting small amounts of chocolate, heating sauces, or making individual desserts.		5	3
31	Springform Pan	6-8 inches (15-20 cm) - ideal for individual servings or small recipes 8-10 inches (20-25 cm) - suitable for standard recipes and medium-sized desserts. and large size 10-12 inches (25-30 cm) - perfect for large recipes, big desserts, or commercial use.		5	3
32	Pie Weights or Dried Beans	Used to weigh down the pie crust. Available in different sizes to fit various pie dishes. Can be used multiple times.		5	3
33	Food Processor	A food processor is a kitchen appliance used to chop, slice, shred, puree, and mix food. It's a versatile tool that can perform various tasks, making it a valuable addition to any kitchen.		1	1
34	Tart Pan with Removable Bottom	Small 6-8 inches (15-20 cm) ideal for individual servings or small tarts medium size 8-10 inches (20-25 cm) - suitable for standard tarts and quiches. large size 10-12 inches (25-30 cm) - perfect for big tarts and desserts.		5	3
35	Sharp Razor Blade or Lame	A sharp razor blade or lame is a tool used to score or cut dough, bread, or pastries. It's a crucial tool for bakers and chefs, allowing for precise cuts and decorative edges.		5	3

S. No	Name of item	Specification	Images	CBT	Non-CBT
36	Spray Bottle	Spray bottles can be made from various materials, such as plastic, glass, or metal.		5	3
37	Medium Saucepan	A medium saucepan typically has a capacity of 2-4 quarts (2-4 liters). Saucepan materials can include stainless steel, non-stick coatings, or hard anodized aluminum. Many medium saucepans have a comfortable handle, making it easy to lift and pour.		5	3
38	Sieve	6-8 inches (15-20 cm) - ideal for small batches or individual servings. 8-10 inches (20-25 cm) - suitable for standard recipes and medium-sized batches. 10-12 inches (25-30 cm) - perfect for large batches or commercial use.		5	3
39	Small Pan	1-2 quarts (1-2 liters) - perfect for tiny batches or individual servings. 2-3 quarts (2-3 liters) - suitable for small batches or side dishes. 3-4 quarts (3-4 liters) - ideal for cooking small meals or snacks.		5	3
40	Wooden Ma'amoul Molds	Ma'amoul molds are made from natural wood, often featuring intricate carvings and designs. The molds feature traditional Middle Eastern patterns and designs, adding an authentic touch to the cookies. Ma'amoul molds come in various shapes and sizes, allowing for creativity and versatility in cookie design.		5	3
41	Cookie Scoop	1-2 tablespoons (15-30 ml) - ideal for mini cookies or cookie bites. 2-3 tablespoons (30-45 ml) - suitable for standard-sized cookies. 3-4 tablespoons		5	3

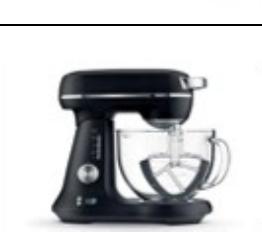
S. No	Name of item	Specification	Images	CBT	Non-CBT
		(45-60 ml) - perfect for larger cookies or cookie sandwiches.			
42	Pastry Blender	A pastry blender is a kitchen tool used to mix and blend butter or shortening into flour, creating a mixture that's essential for making pastry dough.		5	3
43	Cutting Board	Material: Acrylic Polypropylene plastic (food grade plastic), color coded Set of 5 Colors: white, green, yellow, red, blue.		5	3
44	Cornflakes	Cornflakes are a popular breakfast cereal made from toasted corn flakes. They're a crunchy and sweet breakfast option that's easy to prepare and fun to eat.		5	3
45	Non-stick Pan	The pan is coated with a layer that prevents food from sticking. Non-stick pans are often made from durable materials, such as stainless steel or hard anodized aluminum.		5	3
46	Large Pot or Pan	12-16 quarts (11-15 liters) - perfect for big batches of food- 16-20 quarts (15-19 liters) - ideal for large families or commercial use. - Commercial: 20-24 quarts (19-23 liters) or larger - designed for heavy-duty commercial use..		5	3
47	Small Saucepan	1-2 quarts (1-2 liters) - perfect for small batches of food. - 0.5-1 quart (0.5-1 liter) - ideal for tiny batches or individual servings.		5	3
48	Blender	Three in one blending, juicing, grinding, minimum requirements are power 800-Watt, voltage 220 V, 50 Hz, two speeds one pulse, with suction feet to grip on surfaces, minimum jug capacity 1.7		1	1

S. No	Name of item	Specification	Images	CBT	Non-CBT
49	Rubber Spatula	A rubber spatula is a kitchen tool used for scraping, spreading, and folding food. It's a versatile tool that's essential for many cooking and baking tasks.		5	3
50	Piping Bag	Piping bags are made from flexible materials, such as plastic, silicone, or cloth. Piping bags can be disposable or reusable, depending on the material. - Piping bags come in various sizes, from small to large.		5	3
51	Piping Tips (star tip, round tip, grass tip, lettering tips)	A star tip has a star-shaped opening that creates a star-tipped border or design. A round tip has a circular opening that creates a smooth, rounded line or design. A grass tip has a small, slit-like opening that creates a grass-like texture or design. Lettering tips have a small, round or oval opening that creates precise, smooth lines for writing.		5	3
52	Turntable	A turntable has a rotating platform that allows for easy display and serving. A sturdy base provides stability and prevents the turntable from tipping over. Many turntables are easy to clean and maintain.		5	3
53	Silicone Molds	Silicone molds are flexible, rubber-like molds used for baking, cooking, and crafting. They're a versatile tool for creating unique shapes and designs.		5	3
54	Fondant Smoother	Fondant smoothers have a flat surface that allows for easy smoothing and flattening of fondant.		5	3

S. No	Name of item	Specification	Images	CBT	Non-CBT
55	Ribbon Cutter	Ribbon cutters have a sharp blade that cuts through ribbons and other materials cleanly and precisely.		5	3
56	Lace Mold	Lace molds have intricate designs and patterns that are transferred to the baked goods		5	3
57	Personal Protective Equipment (PPE) (including disposable nitrile gloves, apron, hairnet)	Personal Protective Equipment (PPE) is worn to protect against various hazards and contaminants in the workplace, including food handling and preparation environments. PPE helps prevent the spread of illness and contamination.		30	15
58	Can Opener	A manual can opener is a handheld device that requires manual effort to open cans. It's inexpensive, easy to use, and doesn't require electricity.		5	3
59	Skillet	Skillets can be made from various materials, such as stainless steel, cast iron, non-stick, or copper. Skillets come in different sizes, ranging from small to large.		5	3
60	Basting Brush	Basting brushes have a handle made from materials such as wood, plastic, or metal. - Basting brushes come in various sizes, ranging from small to large.		5	3
61	Grill	A grill is a cooking device used to cook food over direct heat, typically using a combination of heat, smoke, and flames. Grills are popular for outdoor cooking and are often used to prepare a variety of foods, including meats, vegetables, and fruits.		1	1

S. No	Name of item	Specification	Images	CBT	Non-CBT
62	Cooling Rack	Toasters have heating elements, such as coils or quartz, that heat up to toast the bread.		5	3
63	Toaster	Toasters have heating elements, such as coils or quartz, that heat up to toast the bread.		3	1
64	Paring Knife	Paring knives have small blades, typically 2-4 inches (5-10 cm) in length.		5	3
65	Wax Paper	Wax paper has a wax coating on one or both sides, which provides a non-stick surface.		5	3
66	Candy Thermometer	Candy thermometers have a temperature gauge that displays the current temperature of the sugar solution.		5	3
67	Brushes	Brushes have handles, which can be made from various materials, such as wood, plastic, or metal.		5	3
68	Squeeze Bottle	Used for storing and dispensing condiments, such as ketchup, mustard, and mayonnaise.		5	3
69	Muddler	Muddler has a flat end used for mashing and muddling ingredients. Made from plastic, lightweight and easy to clean.		5	3

S. No	Name of item	Specification	Images	CBT	Non-CBT
70	Bar Spoon	Bar spoons are made from durable materials, such as stainless steel or copper, that can withstand repeated use and cleaning.		5	3
71	Straw	Straws are typically tube-shaped, allowing for easy sipping of liquids.		5	3
72	Espresso Machine	Espresso machines are popular in homes, offering a convenient way to make high-quality espresso.		1	1
73	Milk Frother	Milk frothers are used to create a variety of coffee drinks, such as lattes, cappuccinos, and macchiatos.		1	1
74	Ice Cream Scoop	An ice cream scoop is a kitchen utensil used to portion and serve ice cream. It's a popular tool for ice cream shops, homes, and parties.		5	3
75	Ramekins	Ramekins are small, individual-sized baking dishes used for serving and baking various foods, such as desserts, appetizers, and side dishes. They are typically made of ceramic, glass, or porcelain materials.		5	3
76	Refrigerator	Refrigerators have temperature controls that allow you to adjust the temperature to your liking.		1	1
77	Freezer-Safe Bags	Freezer safe bags are made from durable materials, such as polyethylene or polypropylene, that can withstand freezing temperatures.		1	1

S. No	Name of item	Specification	Images	CBT	Non-CBT
78	Cleaning Brush	Cleaning brushes have bristles or fibers that are designed to pick up dirt and grime.		5	3
79	Mild Detergent	Mild detergents have a gentle formula that's designed to clean without causing damage or irritation.		5	3
80	Warm Water	A non-abrasive sponge is a type of cleaning tool that is designed to clean surfaces without scratching or damaging them. It's typically made of a soft, gentle material that won't harm delicate surfaces.		5	3
81	Non-abrasive Sponge	A kneading machine, also known as a dough kneader or mixer, is a kitchen appliance used to knead and mix dough, batter, and other mixtures. It's an essential tool for bakers, pastry chefs, and home cooks.		5	3
82	Kneading Machine	A kneading machine, also known as a dough kneader or mixer, is a kitchen appliance used to knead and mix dough, batter, and other mixtures. It's an essential tool for bakers, pastry chefs, and home cooks.		1	1
83	Digital Thermometer	Digital thermometers are used in cooking to ensure that food is cooked to a safe internal temperature.		1	1
84	Stand Mixer	Stand mixers are used for mixing and kneading dough for bread, pastries, and other baked goods.		1	1

S. No	Name of item	Specification	Images	CBT	Non-CBT
85	Dough Hook	Dough hooks are used to knead dough for bread, pastries, and other baked goods.		5	3
86	Ruler	Rulers have measuring markings, such as inches, feet, yards, or metric units, to measure lengths and widths.		2	2
87	Zip-top Bags	Zip top bags are used for storing food, snacks, and other edible items.		5	3
88	Airtight Containers	Airtight containers are used for storing food, snacks, and other edible items.		1	1
89	Deck Oven	Deck ovens are designed to cook at high temperatures, usually around 400°F (200°C), to achieve crispy skin and tender meat.		1	1
90	Multimedia projector	Multimedia projects can be used to create engaging and interactive learning experiences		1	1
91	Computer	Computers can be used for tasks such as word processing, interactive learning experiences		1	1

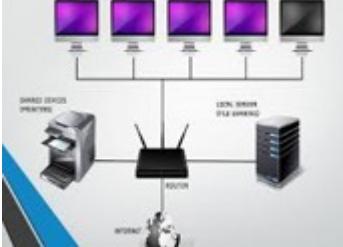
S. No	Name of item	Specification	Images	CBT	Non-CBT
92	Printer	Printers are used to print documents, such as letters, reports, and contracts.		1	1
93	kitchen hood	Kitchen hoods provide ventilation, removing airborne.		1	1
94	kitchen ventilation	kitchen ventilation wall mounted kitchen exhaust fan		1	1
95	fresh air unit in kitchen	Air curtains create a smooth, consistent airflow that separates the kitchen environment from the outside environment		1	1
96	Floor mop bucket	With 02 Dry Mops with handles and 02 Wet mops with handles. Material: Plastic with Steel Handle and 4 Wheels capacity: 20-L product size: 63x27x67cm		2	2
97	Air Tight Jars	Air tight storage glass jar with clip top Use: Food Storage Color: clear Size: 500ml Lid material: clip top		12	6
98	Salamander Grill (Stainless Steel)	Dimension 880x440x610 mm Controllers 6 Power 10.3Kw Weight 47Kg		1	1

S. No	Name of item	Specification	Images	CBT	Non-CBT
99	Bain Marie	Mobile Dry Bain Marie with Cabinet (Hot) 4 Bowls 1060x668x900mm Voltage 220V-240V Max Height of GN Pans 150mm x Hot air circulation heating		1	1
100	Sink	Tripple Sink Bench Dimension:1500x610x900+200mm Package Dimension 1520x630x680 mm Cube :0.65 m3 Weight: 24Kg		3	3
101	Baking trays	Material aluminum, high quality smooth finish, Standard		12	6
102	Bread Mould Small	Material: mild steel, Standard size: dimensions8x4.5x4 inches,		6	3
103	Bread Mould Large	Material: mild steel, minimum dimensions10x5x5inches, loaf pan with cover		6	3
104	Baguette pans	Material: perforated steel, 20 swg, 5 loaves pan, minimum sizes: 22x15x2.15 inches		3	2
105	Gun Lighter	Metallic gun lighter to ignite burners, minimum 11inches long.		12	6

S. No	Name of item	Specification	Images	CBT	Non-CBT
106	Lemon Squeezer	Material: Stainless Steel, durable with heavy squeezing part and handles, Minimum length 6 inches.		2	2
107	Ice cream Scoop	Material cast aluminum, minimum 6.5 inches long		1	1
108	Bread Basket	Minimum diameter 8.5 inches		6	3

Lab 03: Tools and Equipment of Tourism & Airports Operations

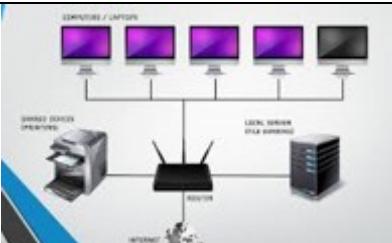
(For Class of 15 to 25 Students)

S. No	Name of item	Brand/Make & Specification	Images	CBT	Non-CBT
1	latest computer set complete with all accessories	The latest computer set is a comprehensive package that includes a high-performance computer, monitor, keyboard, mouse, and other essential accessories.		25	10
2	Computer Lab	A computer lab is a designated area equipped with multiple computers, software, and other technology resources, used for educational, training, or research purposes.		1 As Per Airline/Travel Agency	1 As Per Airline/Travel Agency
3	Geo Political World map	A geo-political world map is a visual representation of the world's countries, borders, and territories, highlighting their political relationships, boundaries, and geographical features.		1 Per Student	1 Per Student
4	Training Stationary	Training stationery refers to the materials and supplies used in educational or training settings to facilitate learning and instruction. These can include a wide range of items, from basic office supplies to specialized training tools.		1 set per student	1 set per student
5	Internet Connection	Use physical cables to connect devices to the internet, such as Ethernet cables.		As per requirement	As per requirement

S. No	Name of item	Brand/Make & Specification	Images	CBT	Non-CBT
6	World Map Atlas	A world map atlas is a comprehensive collection of maps that provide a detailed representation of the world's geography, including countries, cities, rivers, mountains, and other geographical features.		1 per student	1 per student
7	CRS AMADEUS,GA LILEO for Air Ticketing & Reservation System	CRS (Computer Reservation System) AMADEUS and GALILEO are two of the most widely used systems in the travel industry for air ticketing and reservation management		1 per student	1 per student
8	Portal www.24x7 rooms for hotel booking	is an online hotel booking portal that allows users to search, compare, and book hotel rooms from a vast inventory of hotels across various locations		1 per student	1 per student

Lab 04: Tools and Equipment of Hotel Operations

(For Class of 15 to 25 Students)

S. No	Name of item	Brand/Make & Specification	Images	CBT	Non-CBT
1	Computer (40 GB Hard 256 Ram & 2.8 Mega Hertz Processor)	This computer is a relatively older model with a 40 GB hard drive, 256 MB of RAM, and a 2.8 GHz processor. It can still perform basic tasks.		25	10
2	Mock Room for Housekeeping training	A fully furnished bedroom according to a renoud hotel. Bed, AC, Dressing Table		1	1
3	Front Office for training	The front office provides a hands-on training environment for front office staff to practice procedures and techniques.		1	1
4	Training Restaurant	The training restaurant is designed to replicate a real restaurant, including kitchen equipment, dining area, and service stations.		1	1
5	Internet Connection	Use physical cables to connect devices to the internet, such as Ethernet cables.		1	1

Auxiliary Requirement of TVET Lab workshop

(FOR CLASS OF 15 to 25 Students)

Sr No.	Tools/ Equipment	Description	Image	CBT	Non-CBT
1	Work benches	Heavy-duty steel frame, hardwood/metal top, min. 1200 x 600 mm		6	6
2	Stools/Chairs	Ergonomic, adjustable height, durable (metal/plastic frame)		25	25
3	Storage Cabinets	Lockable steel/aluminum, with adjustable shelves		15	10
4	Tool Racks	Wall-mounted/standalone, labeled compartments		15	10
5	White board/ Notice Board	Minimum 4'x3', magnetic (optional), with markers/pins		1	1

Standard Area Required for TVET Lab workshop

Length * width = (25 to 35) X (16 to 25)

NAVTTC

CERTIFICATE

This Standard Manual of Tools/ Equipment specification has been developed and reviewed by the NAVTTC Centre of Excellence in Modern Technologies, Islamabad under supervision/ Guidance of the following faculty members:

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4.	Mr. Khalid Mehmood	HOD Electrical
5.	Mr. Ghulam Shabbar	Instructor, Carpentry & Furniture
6.	Engr Awais Rasool	Instructor Civil
7.	Mr. Mubashir Ahmad	Instructor Electrical
8.	Mr. Muhammad Wameq Ayaz	Instructor Civil
9.	Mr. Mian Muhammad Hussain	HOD Mechanical
10.	Ms. Muqadas Awan	Instructor Fashion Designing & Dress Making
11.	Mr. Jebran Ahmed Qureshi	Instructor Health & Safety
12.	Mr. Asif Mehmood	Instructor Machinist
13.	Mr. Shaher Bano	Instructor Beautician
14.	Mr. Shahid Hussain	Instructor Plumbing & Solar Water Heating
15.	Mr. Khurram Ahmad	Instructor Auto Mechanic
16.	Mr. Hanzala Zahid	Instructor HVACR
17.	Mr. Hanzala Nouman	Jr. Instructor Electrical
18.	Ms. Maryam Ramzan	Jr. Instructor Chef
19.	Mr. Zaryab Khan	Jr. Instructor Mechatronics
20.	Mr. Shahzada Inayat	Jr. Instructor Advance CNC
21.	Mr. Mahboob Alam	General Workshop Maintenance worker
22.	Mr. Haris bin Talha	Asst Compilation
23.	Mr. Malik Waqar Hussain	Focal Person (Takamol) Compilation