

Approved Procurement Plan dated.29.09.2020
Name of the ITI - Ambattur

SL NO	Procurement Package Number	Approved Item	SPECIFICATION	TRADE/COURSE FOR WHICH IT IS REQUIRED	TOTAL QTY Approved	As per NSQF Syllabus
1	1	AIR CONDITIONER - 2 TON	Air-Condition type – Split Tonnage - 2 Ton Condenser coil – Copper Auto Air swing Auto Clean function Speed settings – Turbo, Medium, High, Low, Auto Dust filter Air directions – 4 ways Outdoor 10 m distance Power supply -230V Cooling capacity – 6100 / 3050 watts 5 star Rating with Stabilizer Remote, Connecting pipes and User manual Warranty – 1 year Installation - free of cost.	DRAUGHTSMAN CIVIL	4 Nos.	47
2	2	SAWHNEY	A Course In Electrical And Electronic Measurements And	Books & Learning	2 Nos.	Books
3	2	AGOR	A T/b Of Advanced Surveying	Books & Learning	2 Nos.	Books
4	2	UDAYA KUMAR	A Text Book On Building Services	Books & Learning	2 Nos.	Books
5	2	THERAJA	A Textbook Of Electrical Technology In SI Units Vol 1	Books & Learning	2 Nos.	Books
6	2	THERAJA	A Textbook Of Electrical Technology In SI Units Vol 3	Books & Learning	1 No	Books
7	2	THERAJA	A Textbook Of Electrical Technology Vol 2	Books & Learning	2 Nos.	Books
8	2	THERAJA	A Textbook Of Electrical Technology Vol 4 Electronic Devices &	Books & Learning	2 Nos.	Books
9	2	AGOR	A Textbook Of Surveying and Levelling	Books & Learning	2 Nos.	Books
10	2	GOPI	Advanced Surveying Total Station GPS,GIS And Remote	Books & Learning	2 Nos.	Books
11	2	GERLING	All About Machine Tools 2/ed	Books & Learning	2 Nos.	Books
12	2	VISHNU	Autocad 2019	Books & Learning	2 Nos.	Books
13	2	TICKOO	Autocad 2020 for Engineers and Designers Basic and	Books & Learning	1 No	Books
14	2	KIRPAL SINGH	Automobile Engineering Vol 2	Books & Learning	2 Nos.	Books
15	2	KIRPAL SINGH	Automobile Engineering Volume I	Books & Learning	2 Nos.	Books
16	2	BOSCH GMBH	Automotive Handbook, 9th Edition	Books & Learning	1 No	Books
17	2	MUTHUSUBRAM	Basic Electrical And Electronics Engineering	Books & Learning	2 Nos.	Books
18	2	ANWANI	Basic Electrical Engineering	Books & Learning	2 Nos.	Books
19	2	KOTHARI	Basic Electronics 2/ed	Books & Learning	2 Nos.	Books
20	2	RANGWALA	Building Construction	Books & Learning	2 Nos.	Books
21	2	VERMA	Civil Engineering Drawing & House Planning	Books & Learning	2 Nos.	Books
22	2	GUPTA	Comdex Hardware and Networking Course kit W/cd	Books & Learning	2 Nos.	Books

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23	2	AGRAWAL	Comdex Tally 9 Course Kit With Cd	Books & Learning	2 Nos.	Books
24	2	BATRA	Comprehensive Injection Moulding	Books & Learning	2 Nos.	Books
25	2	PATIABIRAMAN	Computer Basics For Bioinformatics	Books & Learning	2 Nos.	Books
26	2	VISHNU	COMPUTER HARDWARE & NETWORKING WITH FREE CD	Books & Learning	2 Nos.	Books
27	2	TANENBAUM	Computer Networks 5/ed	Books & Learning	2 Nos.	Books
28	2	BATRA	Design Of Blow Moulds •	Books & Learning	1 No	Books
29	2	LARMINE	Electric Vehicle Technology Explained, 2ed	Books & Learning	2 Nos.	Books
30	2	BHATI	Engineering Drawing Plane and solid geometry 53 edition W/CD	Books & Learning	2 Nos.	Books
31	2	VENUGOPAL	Engineering Graphics 15e	Books & Learning	2 Nos.	Books
32	2	RANGWALA	Engineering Materials (Materials Science)	Books & Learning	2 Nos.	Books
33	2	RAJPUT	Engineering Materials (including Construction Materials)	Books & Learning	2 Nos.	Books
34	2	DUTIA	Estimating and Costing in Civil engineering Theory and Practice	Books & Learning	2 Nos.	Books
35	2	MCGRATH	Excel VBA in Easy Steps 2/ed	Books & Learning	2 Nos.	Books
36	2	ANDREWS	Food and Beverage Service A Training Manual 3/ed	Books & Learning	2 Nos.	Books
37	2	ROY	Fundamentals Of Surveying 2/ed	Books & Learning	2 Nos.	Books
38	2	NADHANI	GST ACCOUNTING WITH TALLY. ERP 9	Books & Learning	2 Nos.	Books
39	2	HARPER	Handbook of Plastic Processes	Books & Learning	1 No	Books
40	2	BOSE	Hardware and Software of Personal Computers	Books & Learning	2 Nos.	Books
41	2	WHITE	How Computer Work 9/ed	Books & Learning	2 Nos.	Books
42	2	DERFLER	How Networks Works 7/ed	Books & Learning	2 Nos.	Books
43	2	PYE	Injection Mould Design	Books & Learning	2 Nos.	Books
44	2	RAJARAMAN	Introduction to Information Technology 3rd edition	Books & Learning	2 Nos.	Books
45	2	TURBAN	Introduction to Information Technology 2/ed	Books & Learning	2 Nos.	Books
46	2	PUNMIA	Irrigation And Water Power Engineering 16/ed	Books & Learning	2 Nos.	Books
47	2	SHARMA	Irrigation Engineering and Hydraulic Structures	Books & Learning	2 Nos.	Books
48	2	GARG	Irrigation Engineering And Hydraulic Structures	Books & Learning	2 Nos.	Books
49	2	NEGRINO	JavaScript Visual Quickstart Guide	Books & Learning	2 Nos.	Books
50	2	SINGH	Laptop Repairing And Upgrading Course	Books & Learning	2 Nos.	Books
51	2	SETHI	Machinist Trade Theory Assignment Test Solved	Books & Learning	2 Nos.	Books

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52	2	MATHIVANAN	Microprocessors,Pc Hardware AndInterfacing	Books & Learning	2 Nos.	Books
53	2	LOT A	Modern Computer Hardware Course	Books & Learning	2 Nos.	Books
54	2	PHILIP	Modern Cookery 6/ed Vol -1	Books & Learning	2 Nos.	Books
55	2	PHILIP	Modern Cookery 6/ed Vol-2	Books & Learning	2 Nos.	Books
56	2	EHSANI	Modern Electric Hybrid Electric and Fuel Cell Vehicles 3/ed	Books & Learning	1 No	Books
57	2	KOTHARI	Power System Engineering 3/ED	Books & Learning	2 Nos.	Books
58	2	RAM	Power System Protection And Switchgear 2/ED	Books & Learning	2 Nos.	Books
59	2	RAO	Power System Protection Static Relays With Microprocessor	Books & Learning	2 Nos.	Books
60	2	HMT	Production Technology	Books & Learning	1 No	Books
61	2	PSG	PSG : Design Data Data Book Of Engineers	Books & Learning	2 Nos.	Books
62	2	GUPTA	Roads Railways Bridges Tunnel Harbour Dock Engineering	Books & Learning	2 Nos.	Books
63	2	AHUJA	Roads Railways Bridges Tunnels Engineering	Books & Learning	2 Nos.	Books
64	2	SAKTHI	Sakthi's Superior Guide RRB Non Technical Popular Categories	Books & Learning	2 Nos.	Books
65	2	BALLARD	Sams Teach Yourself Javascript in 24 Hours 5/ed	Books & Learning	2 Nos.	Books
66	2	BASAK	Surveying and Levelling 2/ed	Books & Learning	2 Nos.	Books
67	2	PUNMIA	Surveyin V	Books & Learning	2 Nos.	Books
68	2	PUNMIA	Surveyin V '2	Books & Learning	2 Nos.	Books
69	2	RAO	SWITCHGEAR PROTECT ON AND POWER SYSTEMS	Books & Learning	2 Nos.	Books
70	2	NIR	The Complete Technology Book OnIndustrial Polymers	Books & Learning	1 No	Books
71	2	NIR BOARD	The Complete Technology Book On Plastic Extrusion Moulding	Books & Learning	1 No	Books
72	2	BALI	Theory of Cookery	Books & Learning	2 Nos.	Books
73	2	SINGH	Theory Of Plasticity Metal Forming Processes	Books & Learning	2 Nos.	Books
74	2	VAZIRANI	Transportation Engineering Volume 2	Books & Learning	2 Nos.	Books
75	2	VAZIRANI	Transportation Engineering Volume 1	Books & Learning	2 Nos.	Books
76	2	KANETKAR	Unix Shell Programming	Books & Learning	2 Nos.	Books
77	2	MUELLER	Upgrading and Repairing Pcs 22/ed •.	Books & Learning	1 No	Books

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78	2	DIXIT	Upkars Gateway Tolsro Code No 1694	Books & Learning	1 No	Books
79	2	BIRDIE	Water Supply & Sanitary Engineering	Books & Learning	2 Nos.	Books
80	2	RANGWALA	Water Supply and Sanitary EngineeringIncluding environmental	Books & Learning	2 Nos.	Books
81	2	RADHAKRISHNA	Welding Technology and Design 3e	Books & Learning	2 Nos.	Books
82	2	JUTZ	Westermann Tables For The Metal Trade Revised 2/e	Books & Learning	2 Nos.	Books
83	2	MMV- NIMI Book	MMV- NIMI Book 1&2 year	Books & Learning	1set	Books
84	2	Diesel Mechanic - NIMI Book	Diesel Mechanic - NIMI Book 1&2 year	Books & Learning	1set	Books
85	2	D.Civil- NIMI Book	D.Civil- NIMI Book 1&2 year	Books & Learning	1set	Books
86	2	Electrical- NIMI Book	Electrical- NIMI Book 1&2 year	Books & Learning	1set	Books
87	2	Electronic Mechanic- NIMI Book	Electronic Mechanic- NIMI Book 1&2 year	Books & Learning	1set	Books
88	2	Welder- NIMI Book	Welder- NIMI Book One year	Books & Learning	1set	Books
89	2	Sheet Metal worker- NIMI Book	Sheet Metal worker- NIMI Book One year	Books & Learning	1set	Books
90	2	Fitter - NIMI Book	Fitter - NIMI Book 1&2 year	Books & Learning	1set	Books
91	2	Machinist - NIMI Book	Machinist - NIMI Book 1&2 year	Books & Learning	1set	Books
92	2	Copa- NIMI Book	Copa- NIMI Book One year	Books & Learning	1set	Books
93	2	Wall Chart for trades- NIMI Wallchart	Wall Chart for trades- NIMI Wallchart	Books & Learning	10 set	Books
94	3	PRINTER WITH SCANNER	FUNCTION- Printer, Copy, Scan multi tasking support Print speed : colour normal up to 18 ppm Print quality : Colour- upto 600 X 600 dpi & 1200 X 1200 dpi effective Connectivity - standard High speed USB 2.0 port , 1GB RAM 200MB available hard disk space CD rom drive USB or network port Operating system- windows software must be upgradable Memory – 8M Paper Handling: Input standard – 150 sheet output -100 sheets Paper size: A3 & A4 Scanner Type – Flatbed Scan size 216 X 297	DRAUGHTSMAN CIVIL	2 Nos.	35
95	3	UPS 5 KVA	Output power: 5 Watts Recharge time: 8 hours Features: Advance battery management Automatic Battery charging in UPS off mode high end micro controller Wave form: Pure sine wave	DRAUGHTSMAN CIVIL	2Nos.	38

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96	3	PLOTTER A1 SIZE	<p>Speed - print speed line drawing – A1 plain paper 70 sec. to 90 sec./page</p> <p>Memory - 256 MB</p> <p>Print Quality - Colour/Black upto 1200 x 1200 dpi</p> <p>Print cartridges - Cyan, Magenta, Yellow, Black</p> <p>Line width - 0.07 mm.</p> <p>Line Accuracy - ±0.1%</p> <p>Document Media - Plain paper</p> <p>Paper Handling - sheet feed for finished output</p> <p>Connectivity - LAN, Fast Ethernet, High speed USB 2.0, Wi-Fi.</p> <p>Power consumption - Operation – 200 watts</p> <p>Power consumption - stand by – 40 watts</p> <p>Operational Temperature range - 5 to 40°.</p> <p>Dimension (W x D x H) – 987 x 530 x 285 mm.</p>	DRAUGHTSMAN CIVIL	2 Nos.	34
97	3	SERVER WORK STATION	<p>CPU: Intel Core i7-6700</p> <p>Graphics: Intel HD Graphics 530</p> <p>Graphics: Intel HD Graphics 530</p> <p>RAM: 8GB</p> <p>Storage : 1TB</p> <p>Communications: Gigabit Ethernet</p> <p>Dimensions (W x D x H): 34 x 38 x 10cm</p> <p>It even has four DIMM slots to take full advantage of dual-channel technology.</p> <p>As for the rest of the HP workstation family, this one comes with the Remote Graphics Software as well as a three-year onsite warranty bundled.</p> <p>The only major compromise is the fact that it will only take low profile graphics cards.</p>	DRAUGHTSMAN CIVIL	2Nos.	32
98	3	LAP TOP	<p>8th Generation Intel Core i7-7500U Processor (4M Cache, up to 3.50 GHz), Windows 10 Home (64-bit)16GB DDR4 2400MHz Memory, 1TB 5400 RPM SATA Hard DriveAMD Radeon R7 M445 Graphics 4GB GDDR5, Tray load DVD Drive (Reads and Writes to DVD/CD)17.3-inch FHD (1920 x 1080) Anti-Glare LED-Backlit Display, HD Webcam, Non-touch802.11ac + Bluetooth 4.2, Dual Band 2.4&5 GHz, 3-Cell Li-ion Battery (Integrated), 42Whr. 1 Year Manufacturer's Warranty</p>	DRAUGHTSMAN CIVIL	4 NOS.	32

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99	3	Interactive Board with Projector	Cabinet Cabinet Wall Mounted lockable enclosure Material of the Cabinet Laptop Degree of Protection (IP Rating) Optical Drive DVD/RW CPU CPU Intel Core I3 Processor Generation 8th RAM (GB) 4 RAM upgradable upto (GB) 16 Hard Disk Capacity (GB) 1000 Hard Disk Upgradable upto (GB) 2000 OS Compatibility Windows 10 Professional VGA Port Yes No. of USB 2.0 Ports (Nos) 1 No. of USB 3.0 Ports (Nos) 1 LAN Port Yes Keyboard Inbuilt Mouse /Track Pad Inbuilt Operating System DoS Central Controller Central Controller Not Available Provisions available to control various components NA Visualizer Visualizer Not Available TYPE NA Technology NA Capture Size / Image Size NA Resolution (Pixels) NA Image Pick up Device (inch) NA Video Frame Rates (fps) 0 Optical Zoom 0 Digital magnification 0	ICT	1 No	ICT
100	3	BSNL Fibre optics	BSNL Fibre optic connection and installation	ICT	1 No	ICT
101	3	MULTIFUNCTIONAL MFM	Ungrouped Print Technology Laser Type of Machine Multifunction Machine Type of Printing Mono Cartridge Technology Separate Drum and Toner (Mono Component) Developer Unit Yes Platen/Flatbed Size A3 Paper Size (Original/Image) A3/A3 RAM size (MB) 128 Hard Disk Capacity(GB) 0 Minimum Speed per Minute as per ISO/IEC 24734 in A4 Size-Mono 20 Minimum Speed per Minute as per ISO/IEC 24734 in A4 Size-Colour 0 Minimum Speed per Minute as per ISO/IEC 24734 in A3 Size-Mono 10 Minimum Speed per Minute as per ISO/IEC 24734 in A3 Size-Colour 0 Scanning Feature Availability Yes Duplexing Feature Availability Yes Faxing Feature Availability No Speed of Fax, If Fax Feature is available NA Networking Feature Availability No If yes, Type of Network Interface Ethernet 10/100 Wi-Fi Availability No If yes,Wi-Fi Type NA Original Document Feeder Type Platen Feeder Capacity (Number) 100 Number of Main Paper Tray 1 Each Main Paper Tray Capacity (Number) 250 Bypass Facility Yes	ICT	1 No	ICT

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102	3	Intel Core i5 9400 4 GB/ 1000 GB HDD/ Windows 10 Professional	Processor Processor Make Intel Processor Generation 9 Number of Cores per Processor 6 Processor Base Frequency (GHz) 2.9 Processor Description Intel Core i5 Processor Number Intel Core i5 9400 Out of Band Management NA Cache (MB) 9 Motherboard Chipset Series Intel Q Series Expansion Slots (PCIe x 1) (Number) 1 Chipset Number Intel Q 370 Expansion Slots (PCIe x 4) (Number) 0 Expansion Slots (PCIe x 16) (Number) 1 Expansion Slots (PCI) (Number) 1 Expansion Slots (M Dot 2) 2 Graphics Graphics Type Integrated Graphic Card Description NA Size of Memory in Case of Dedicated Graphic Card (GB) 0 Size of VRAM in case of Integrated Graphics (MB) 0 Operating System Operating System (Factory Pre-Loaded) Windows 10 Professional Recovery Image Media CD from the OEM OS Certification NA Memory Type of RAM DDR4 RAM Size (GB) 4 RAM Speed (MHz) 2666 Total Numbers of DIMM Slots Available 4	ICT	1 No	ICT
103	3	Server Computer	PROCESSOR Intel® Xeon® Scalable processors OPERATING SYSTEMS AND VIRTUALIZATION SOFTWARE SUPPORT FOR PROLIANT SERVERS Windows 2019 Server Operating System(Standard Edition) Microsoft Windows Server Red Hat Enterprise Linux (RHEL) SUSE Linux Enterprise Server (SLES) VMware ClearOS CentOS CHIPSET Intel® C621 Series Chipset MEMORY DIMM Slots Available 6 (6 DIMM slots per processor, 6 channels per processor, 1 DIMM per channel) Maximum Capacity (LRDIMM) 128GB (8 x 16GB LRDIMM @2133MHz) Maximum Capacity (RDIMM) 192GB (6 x 32GB RDIMM @2133MHz) NETWORK CONTROLLER Embedded 2-Port 1GbE HPE Ethernet 1Gb 2-port 332i Adapter STORAGE CONTROLLER Software RAID Essential RAID Controller Performance RAID Controller INTERNAL STORAGE DEVICES	ICTSM	01 No.	28

SL NO	Procurement Package Number	Approved Item	SPECIFICATION	TRADE/COURSE FOR WHICH IT IS REQUIRED	TOTAL QTY Approved	As per NSQF Syllabus
104	3	Desktop Computer	Processor: 9th Gen Intel Core i5-9400 processor with intel motherboard Operating System: WINDOWS 10 PRO PRELOADED Memory & Storage: 8GB DDR4 RAM 1TB HDD @ 7200 RPM Tower (15L); Weight: 5.7Kg Front Ports: 4 x USB 3.1 Gen 1, 2 x USB 3.1 Gen 2, 2 x Audio; Rear Ports: 3 x Audio, 1 x VGA, 1 x DP, 1 x HDMI, 4 x USB 2.0, 1 RJ-45, 1 serial 18.5" SVGA Monitor Display Wired Keyboard & Mouse	ICTSM	10 Nos.	29
105	3	A) Laptop,	Processor 10th Generation Intel® Core™ i5-10210U Processor (6MB Cache, up to 4.2 GHz) Operating System Windows 10 Home Single Language English Video Card AMD Radeon™ 610 Series with 2G GDDR5 graphics memory Memory 8GB, 8Gx1, DDR4, 2666MHz Hard Drive 256GB M.2 PCIe NVMe Solid State Drive + 1TB 7200 rpm 2.5" SATA Hard Drive Keyboard English International Non-Backlit keyboard Wireless Driver Driver for Wireless card 9462/9560 Optical Drive Tray load DVD Drive (Reads and Writes to DVD/CD) Wireless 802.11ac 1x1 WiFi and Bluetooth Power cord Power Cord (India) Microsoft Office Primary Battery 3-Cell, 42 WHr, Integrated battery Carrying Cases Color Choice Black color cover for non-touch LCD (2SP) Packaging Optical Software Cyberlink Media Suite Essentials DVD Retail Information	ICTSM	01 each	30

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106	3	B) Notebook	Dimensions (mm) 340.00 x 240.00 x 23.70 Colours Black Operating system Windows 10 Home Battery Capacity (WHR) 31 Battery Cell 3 Display Size 14.00-inch Resolution 1366x768 pixels Processor Processor Intel Core i5 1st Gen 7200U Base Clock Speed 2.5 GHz Burst Clock Speed 3.1 GHz Cache 3MB Memory RAM 8GB Graphics Graphics Processor Intel Integrated HD Graphics 620 Dedicated Graphic Memory Type DDR4 Dedicated Graphics No Storage Hard disk 1TB SSD No Connectivity Wi-Fi standards supported 802.11 b/g/n/ac Bluetooth version 4.2 Inputs Backlit Keyboard Touchpad Speakers 2 Speakers Ports and slots Number of USB Ports 3 HDMI Port Standard Headphone and Mic Combo Jack RJ45 (LAN)	ICTSM	1 No	30
107	3	Tablet	Form factor Touchscreen Dimensions (mm) 249.30 x 164.30 x 7.10 Weight (g) 482.00 Battery capacity (mAh) 7300 Display Screen size (inches) 10.50 Touchscreen Yes Resolution 2560x1600 pixels Pixels per inch (PPI) 287 Hardware Processor 2.35GHz octa-core Processor make Qualcomm Snapdragon 835 RAM 4GB Internal storage 64GB Expandable storage Yes Expandable storage type microSD Expandable storage up to (GB) 2000 Camera Rear camera 13-megapixel Rear Flash LED Front camera 8-megapixel Software Operating system Android 8.1 Skin Samsung Experience UX Connectivity Wi-Fi Yes Wi-Fi standards supported 802.11 a/b/g/n/ac GPS Yes Bluetooth Yes Bluetooth version 5.00 Wi-Fi Direct Yes Sensors	ICTSM	02 Nos.	32

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108	3	Printers: a) Laserjet.	<p>A4 Black and White Laser Multifunction Printer, Print, Copy, Scan and Fax, ADF Print speed up to 21 ppm (black) USB, Ethernet, Wi-Fi Duplex Printing CONNECTIVITY AND COMMUNICATION ePrint capability Yes Ports 1 Hi-Speed USB 2.0; 1 Fast Ethernet 10/100Base-TX; 1 Wireless 802.11b/g/n Network ready Standard (built-in Fast Ethernet, WiFi 802.11 b/g/n) Modem 33.6 kbps Connectivity, standard Hi-Speed USB 2.0 port; built-in Fast Ethernet 10/100Base-TX network port; built-in WiFi 802.11b/g/n Network capabilities Yes, via built-in Ethernet, wireless 802.11b/g/n</p> <p>Scan speed</p> <p>(normal, letter) Up to 7 ppm (b&w), up to 5 ppm (color)</p> <p>Print speed black (normal, letter) Up to 21 ppm Copy speed (black, normal quality, A4) Up to 20 cpm</p>	ICTSM	01 each	33
109	3	B) Deskjet	<p>Printing Technology Inkjet Maximum Resolution 2400 x 1200 dpi Print Speed Black: 22 ppm (ISO), 34 ppm (Draft) Color: 18 ppm (ISO), 34 ppm (Draft) First Print Out Speed Black: 9 sec Color: 10 sec Duplex Printing Print Color CMYK Ink Type Pigment Ink Cartridge Configuration 4 individual cartridges Compatible Ink Cartridges Paper Sizes 3 x 5" to 8.5 x 14" / 7.6 x 12.7 cm to 21.6 x 35.6 cm Paper Capacity Input Tray: 250 sheets Output Tray: 150 sheets Interfaces USB 2.0 Ethernet Wi-Fi OS Compatibility Windows Mac OS X Linux</p>	ICTSM	1 No	33

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110	3	C) Passbook	Printing Technology: Print Method: Impact dot matrix Print Direction: Bi-direction with logic seeking Colour: Black Number of Pins in Head: 24 pins Control Code: PR2 emulation, ESC/P2, IBM PPDS emulation, IBM 4722 emulation* Print Speed: High Speed Draft: (PR2 emulation) 10cpi: 480 cps (PR2 emulation) 12cpi: 432 cps (ESC/P2) 10cpi: 480 cps (ESC/P2) 12cpi: 576 cps Draft: (PR2 emulation) 10cpi: 360 cps (PR2 emulation) 12cpi: 360 cps (ESC/P2) 10cpi: 360 cps (ESC/P2) 12cpi: 432 cps NLQ: (PR2 emulation) 10cpi: 180 cps (PR2 emulation) 12cpi: 180 cps Letter Quality: PR2 emulation) 10cpi: 120 cps (PR2 emulation) 12cpi: 144 cps (ESC/P2) 10cpi: 120 cps (ESC/P2) 12cpi: 144 cps Supported OS: Windows 98 / 2000 / Me / XP / Vista / 7 / 8	ICTSM	1 No	33
111	3	Network Printer	Flatbed; ADF A3, MFD PRINT SCAN COPY. Up to 600 x 600 dpi (mono, ADF); Up to 1200 x 1200 dpi (mono, flatbed) Up to 30 ppm/60 ipm USB 2.0 and USB 3.0 (SuperSpeed); Built-in Fast Ethernet 10/100/1000Base-TX network	ICTSM	01 No.	34
112	3	Online UPS	5 KVA (Enclosed)	ICTSM	02 Nos.	35
113	3	Computer Spares:	As required (Enclosed)	ICTSM	1 SET	41
114	3	Processors (of different make)	INTEL CORE I3Processors 9th Generation Socket LGA 1151 SUPPORT LATEST MOTHERBOARD	ICTSM	4 Nos.	44
115	3	Scanner	Scanning Mode: Flatbed and ADF. Scanning Technology: Color Charged-Coupled Device (CCD) Color Depth: 48 bits (input) – 24 bits (output) Max Optical Resolution: 600 dpi. Maximum Document Size: (A4) File Compression: TIFF G4, JPEG. File Format Output: PDF, Searchable PDF, MS Word, Multi-page TIFF and JPEG.	ICTSM	1 No.	89

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116	3	External Hard disk	2 TB SATA	ICTSM	2 Nos.	58
117	3	Lap top (for convenient to field bus system / control system)	Intel core i7 8th generation, Quad core, 1.8GHz clock speed, 8GB RAM, 512 GB hard disk, Intel UHD Graphics 620, 13.3", 1920 X 1080 pixels, Windows 10 OS.	INSTRUMENT MECHANIC	04 Nos.	164
118	4	TOTAL STATION WITH ALL ACCESSORIES	<p>Angle Measurement Accuracy - 3" to 7" Method – Absolute, Continuous, Diametrical Display resolution – 0.1" to 1" Compensator – Dual axis or better with setting accuracy of 1.5" with intelligent levelling Distance Measurement Range (Prism) - 3km to 4km Accuracy - 2 + 2 ppm under normal condition of visibility Range Reflector less (non-prism) – 0.3 to 500m Accuracy - 2+2ppm under normal conditions of visibility Telescope Magnification / Resolving power – 30X / 2.5" to 3.5" Minimum Focus – 1.3 to 2.0m Field of view – 1°30' Reticule illumination – 5 to 10 brightness level Physical specification Weight – 5 to 6 kg including battery Tribrach Operating Temperature - - 20° to 50°C Protection class – IP 55 or IP 65 Dust & Water Proof Battery – Li-ion Rechargeable batteries with at least 20 hours usage Laser Plummet from Alidade and detachable Tribrach with levelling bubble graphical plate level in the display in</p>	DRAUGHTSMAN CIVIL	4 NOS	29
119	4	DIGITAL THEODOLITE WITH ALL ACCESSORIES	<p>Telescopic Magnification - 26X to 30X Minimum focusing distance - 1 to 1.5m Display resolutions - 1" / 5" Compensator - Dual axis or better Angle accuracy - 2" to 7" Automatic compensator working range - ±3' Laser - Class 2 for Centering Control panel layout (Display) - Double side large character Back-lit LCD Battery - Alkaline batteries with min 20 hours operation, With all standard accessories & manual.</p>	DRAUGHTSMAN CIVIL	4 Nos.	28

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120	4	AUTO LEVEL WITH ALL ACCESSORIES	Instrument should be rugged for field use. Air damped compensator smooth, double sided endless drives for easy and precise targeting and horizontal circle with 160 degree division fitted with side mirror to check circle eccentricity, water resistant. Magnification - 24x Standard deviation for 1 km run levelling - 2.0 mm Objective Aperture - 36 mm Shortest focussing distance - Less than 1 metre Compensating Range - +/- 15 mm Circular bubble 8'/2mm Horizontal Circle - 360 degree with interval of 1 degree. Good quality Aluminium Tripod and 5 meter levelling staff	DRAUGHTSMAN CIVIL	4 Nos	25
121	4	TELESCOPIC ALIDADE	Telescope Length: 9". Compass Dia: 1.5" & Base: 3". Indian make telescopic alidade 175mm with erect image 5 min with / without leveling attachment 178mm (7") erect fitted with tilting drum graduated to read 1:1500 with horizontal circles in corporate for finer adjustment and accuracy. Telescopic aluminium stand packed in water proof canvas cover.	DRAUGHTSMAN CIVIL	2 Sets.	23
122	4	3 PH SLIP RING INDUCTION MOTOR WITH PANEL AND METER ARRANGEMENTS	ROTOR RESISTANCE STARTER RANGE : 5 HP	ELECTRICIAN	1 NO	145
123	4	DISEL GENERATOR SET WITH PANEL AND METER ARRANGEMENTS	WITH CHANGE OVER SWITCH, OVER CURRENT BREAKER AND WATER/AIR COOLED WITH ARMATURE STAR-DELTA CONNECTION AC THREE PHASE RANGE: 7.5KVA, 415V OR HIGHER RATING	ELECTRICIAN	1 SET	153
124	4	MOTOR TRAINEER WITH PANEL AND METER ARRANGEMENTS	DC SHUNT MOTOR, THREE PHASE INDUCTION MOTOR AND SINGLE PHASE INDUCTION MOTOR COUPLED IN SAME SHAFT WITH LOAD ARRANGEMENTS RANGE : 5 HP	ELECTRICIAN	1 SET	152
125	4	PNEUMATIC TRAINER KITS	REFER ENCLOSED LIST	FITTER	1 No	198
126	4	compressor unit	REFER ENCLOSED LIST	FITTER	1 No	197
127	4	PNEUMATIC WORK STATION	REFER ENCLOSED LIST	FITTER	1 No	199
128	4	HYDRAULIC TRAINER KITS	REFER ENCLOSED LIST	FITTER	1 No	202

SL NO	Procurement Package Number	Approved Item	SPECIFICATION	TRADE/COURSE FOR WHICH IT IS REQUIRED	TOTAL QTY Approved	As per NSQF Syllabus
129	4	HYDRAULIC WORK STATION	REFER ENCLOSED LIST	FITTER	1 No	203
130	4	DSO	4 Channel, 70MHz Real Time Sampling 1G Samples/Sec, more than 20 mpts Memory with PC Interface USB, LAN and math function includes +, -, FFT, differential, integral, abs, log and advanced triggering I2C, SPI, UART etc	INSTRUMENT MECHANIC	02 Nos	78
131	4	Magnetic flow meter	Magnetic flow meter with HART communication facility & 4-20 mA output along with SS sump tank, SS measuring tank, SS body pump and with required all fittings accessories and mounted on stand.	INSTRUMENT MECHANIC	02 Nos	126
132	4	Programmable logic controller (micro PLC trainer)	At least digital 8 input & 8 Output, 4 analog input & output with simulation software and hardware for understanding PLC programming and functioning	INSTRUMENT MECHANIC	1 No	152
133	4	Multifunction process control system consist of level, flow, Temperature, pressure with remote set point forward with feedback loops With software	True distributed control system having dedicated redundant function controller, power supply, communication modules, and integrated software modules, algorithms for complex process control. With Level transmitter, pressure transmitter, flow transmitter, temperature transmitter, Control valve, I/ P converter, to study the all type of controls, suitable pipes and fittings, seamless data transfer unit, SCADA, Computer	INSTRUMENT MECHANIC	02 Nos	154
134	4	Different type of control valves such as gate valves, globe valves, ball valves, diaphragm valves, butterfly valves, etc. Electrically actuated, pneumatic actuated and hydraulic actuated	Control valves such as gate valves, globe valves, Ball valves, diaphragm valves, butterfly valves etc. Each valve is actuated with any one type of electrically actuated/ pneumatic actuated/ hydraulic actuated (3 types of actuations should be available with any one type of valve) with working condition and mounted on MS fabricated Stand. With suitable source and fittings.	INSTRUMENT MECHANIC	02 Nos	156

SL NO	Procurement Package Number	Approved Item	SPECIFICATION	TRADE/COURSE FOR WHICH IT IS REQUIRED	TOTAL QTY Approved	As per NSQF Syllabus
135	4	Hydraulic trainer	Hydraulic Trainer with Equipment trays-2Nos, Pressure gauges, Hydraulic Motor, 4/2 & 4/3 (With different mid position) way hand lever valve - 3 Nos each, Pressure sequence valves & Pressure reducing valve-2Nos each, Pressure relief valves & Non return valves-2nos each (one each sub plate type) Shut-off valves, Diaphragm accumulator, Weight upto 10kg-1No, 2/2 way plunger/stem actuates-2 Nos, Standard hoses with quick connectors, Flow dividing valve-1No, 5 way distributor with pressure gauge-1No, All components should be mounted on aluminium profile plate on working condition.	INSTRUMENT MECHANIC	2 Nos.	171
136	4	Pneumatic trainer	Pneumatic trainer consists with pressure gauge, Pneumatic Motor, Single acting cylinder, Double acting cylinder, Air filter Regulator Lubricator with pressure gauge. Hand lever operated valves: 2Nos 5/2 way and 3/2 way, Solenoid valve- 2Nos 5/2 way and 3/2 way, Pilot operated Valve: 5/3 spring centered, 5/2 Spring returned, 3/2 Pilot operated, palm operated valve: 3/2 way valve, Roller lever valve: 5/2 way, 3/2 way valve, Shuttle valve: OR valve, AND valve: Dual Pressure valve, Flow control valve, Non return valve, Block manifold 6ways, Plastic tubing as per required, Quick push-pull connectors, Air compressor. All components should be mounted on aluminium profile plate on working condition.	INSTRUMENT MECHANIC	2 Nos.	172
137	5	PLANE TABLE WITH ALL ACCESSORIES	Plane Table Board 600 x 750 x 22 mm made of soft pine wood with metal corners. Aluminium Tripod Telescopic stand folding type. Brass plate head with thick brass screws and brass fly nut with metal fitting. Brass extra heavy Alidade 60cm with vane locking system in a case. Magnetic Trough 20 cm long compass brass in a box. Plumb bob heavy full brass. Fork full brass. Spirit level 15 cm with adjustable bubble full brass in a wooden case. Canvas cover full size with carrying straps. Kit bag for carrying the above accessories.	DRAUGHTSMAN CIVIL	4 Sets.	22
138	5	FURNITURE FOR SERVER, PRINTER, PLOTTER	Table for Server Table for Printer with scanner Table for Plotter A1 size	DRAUGHTSMAN CIVIL	6 Nos.	41

SL NO	Procurement Package Number	Approved Item	SPECIFICATION	TRADE/COURSE FOR WHICH IT IS REQUIRED	TOTAL QTY Approved	As per NSQF Syllabus
139	5	Steel cup board with eight lockers for trainees	1800x1200x450(with five shelves)	INSTRUMENT MECHANIC	4 Nos.	182
140	6	HAND HELD	G.P.S.Display – color TFT Screen Size – 3.0", Touch Screen Digital camera – minimum 3 mega pixel to store photos with Micro Phone and in built speaker Accuracy- 3 to 5 meters Memory – 500MB Expandable with SD cards Battery – AA Batteries for easy maintenance Data Transfer cable, software for downloading and use with Google earth maps, Instruction manual are to be supplied with the instrument.	DRAUGHTSMAN CIVIL	4 Nos.	30
141	6	PRISMATIC COMPASS	Prismatic compass is made of Aluminium/brass. It is size 110mm. With it is complete in case with Aluminium telescopic/Rigid/Wooden Tripod. Aluminium circle consist of a needle graduated to 30min (0.5) graduations. Painted with water proof paints. Carrying cases are made of Fibre with carrying straps. Least count 30'.	DRAUGHTSMAN CIVIL	2 Sets.	21
142	6	DIGITAL MULTIMETER	RANGE: DC 200MV-1000V,0-10A & AC 200MV-750V,0-10A,RESISTANCE 0-20M OHM AND 3 1/2 DIGITAL	ELECTRICIAN	16 NOS	95
143	7	CAD SOFTWARE	AutoCAD latest version software, get access to AutoCAD for Windows and AutoCAD for Mac, plus industry-specific toolsets of AutoCAD Architecture, AutoCAD Electrical, AutoCAD Map 3D, AutoCAD Mechanical, AutoCAD MEP, AutoCAD Plant 3D and AutoCAD Raster Design (Windows only) for 20 user	DRAUGHTSMAN CIVIL	2 Nos.	33
144	7	Windows Operating System	WINDOWS10	ICTSM	2 licenses	76
145	7	Linux Operating System	REDHAT LATEST	ICTSM	2 Nos.	77
146	7	MS Office	2019	ICTSM	2 Nos.	79
147	7	Anti-virus software	Norton antivirus	ICTSM	2 Nos.	80
148	8	MILLIVOLTMETER	CENTRE ZERO ANALOG PORTABLE BOX HOUSED IN BAKELITE CASE RANGE: 100-0-100MV	ELECTRICIAN	4 NOS	97
149	8	AMMETER MC	ANALOG PORTABLE BOX TYPE HOUSED IN BAKELITE CASE RANGE : 0-500MA,0-5A,0-25A	ELECTRICIAN	4 NOS EACH	98

SL NO	Procurement Package Number	Approved Item	SPECIFICATION	TRADE/COURSE FOR WHICH IT IS REQUIRED	TOTAL QTY Approved	As per NSQF Syllabus
150	8	Steel rule	150 mm (metric and English Marking)	INSTRUMENT MECHANIC	66 Nos	1
151	8	Watch maker screw driver (set of six)	Minimum to maximum 25 (24+1) Nos.	INSTRUMENT MECHANIC	84 Nos	2
152	8	Plier flat nose	100 mm	INSTRUMENT MECHANIC	99 Nos	3
153	8	Hammer ball pein	250 gms. With handle	INSTRUMENT MECHANIC	75 Nos	4
154	8	Twiser fine point	125 mm	INSTRUMENT MECHANIC	70 Nos	5
155	8	File hand smooth	200 mm	INSTRUMENT MECHANIC	94 Nos	6
156	8	File flat 2nd cut	200 mm	INSTRUMENT MECHANIC	88 Nos	7
157	8	Screw driver	set of 5 pieces	INSTRUMENT MECHANIC	98 Sets.	8
158	8	Adjustable spanner	Different sizes	INSTRUMENT MECHANIC	100 Nos	9

Sd/...
Director of Employment and Training

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For Director 30/09/20

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