

# Schedule of supply

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## 1. List of Goods and Related Services

**Package Name: Supply of Consumer electronics items for Government Polytechnic (Women) Rehan, Distt.-Kangra (H.P.) to enhance technical and vocational skills among the youth of Himachal Pradesh. HPSDP/DOTE/WP/10; RFQ No. GP007/2020**

| Lot No: 1                            |                                   |  |                       |          |                |                          |                                |  |  |
|--------------------------------------|-----------------------------------|--|-----------------------|----------|----------------|--------------------------|--------------------------------|--|--|
| Lot Name: Consumer electronics items |                                   |  |                       |          |                |                          |                                | Delivery Time (in days): not more than 180 |  |
| Item No                              | Name of Goods or Related Services | Description  | Unit of Measure -ment | Quantity | Unit Price INR | Total price per item INR | Sales and other taxes per item | Total Price (Including GST)                | Remarks<br>(Please mention Page Number of detailed information brochure having make and model no.) |
| 1                                    | 2                                 | 3  | 4                     | 5        | 6              | 7= 5*6                   | 8= 7*@GST%                     | 9=7+8                                      |  |
| 1.                                   | <b>Split AC 2.0 Ton</b>           | <ul style="list-style-type: none"> <li>•Capacity: Ton 2.0</li> <li>•Cooling Capacity Nominal (Kcal/hr) 5800</li> <li>•Cooling Cap (min)Guaranteed (Kcal/hr) 5500</li> <li>•Min. Room Discharge AIR flow (Cub. m/hr) 8100</li> <li>•EER (w/w) 2.7Min</li> <li>•Star Rating 3 Star &amp; Above</li> <li>•Power V/Hx/Ph 220-240V / 50Hz 1Ph</li> <li>•Capacity (BTU/hr) 24000</li> <li>•Refrigerant R22. R407C or R410a</li> <li>•Air Flow Volume (m3/h) 1100</li> <li>•Power Consumption 2340 W</li> <li>•Operation Current 10.8 A</li> <li>•Capacity 24000 BTU</li> <li>•Compressor High quality famous brand rotary type compressor</li> <li>•Elegant panel design, with LED/LCD central Display</li> <li>•Galvanized outdoor unit or plastic</li> </ul> | No.                   | 13       |                |                          |                                |  |  |

|    |                       |  |     |    |  |  |  |  |  |
|----|-----------------------|--|-----|----|--|--|--|--|--|
|    |                       | outdoor unit for anti-corrosion<br>• More than 10 meters remote control distance<br>• Flat panel for easy cleaning, washable plastic filter and horizontal auto louver   |     |    |  |  |  |  |  |
| 2. | <b>Vacuum Cleaner</b> | <ul style="list-style-type: none"> <li>• Suction Power 400 Watt</li> <li>• Motor Max. Power 1,400 Watt</li> <li>• Dust Capacity 0.4 Litre</li> <li>• Noise Level (db)</li> <li>• Dust Collection Efficiency 99.8 %</li> <li>• Auto Drive Head</li> <li>• Extendable Multi Angle Wide Brush</li> </ul>  | No. | 5  |  |  |  |  |  |
| 3. | <b>P.A. System</b>    | <ul style="list-style-type: none"> <li>• Highly sensitive 16" long gooseneck microphone for comfortable sharing by two delegates</li> <li>• Bright and clear ring LED indicator</li> <li>• Compact and attractive die case aluminium cabinet in a unique profile</li> <li>• Headphone output available from each unit</li> <li>• Automatic Mic Off feature in Delegate units</li> <li>• Unique Send/Return facility through a stereo jack in Central Amplifier CMA - 4400</li> <li>• Chairman Unit has Priority Switch</li> <li>• Record &amp; playback the messages with the Secretary Unit</li> <li>• AC Mains &amp; 24V DC operation</li> <li>• Central amplifier is 19" rack mountable</li> <li>• Three Mic inputs and one Aux input for various user applications.</li> </ul> | No. | 10 |  |  |  |  |  |

|                      |                        |   |     |    |  |  |  |  |  |
|----------------------|------------------------|---|-----|----|--|--|--|--|--|
|                      |                        | <ul style="list-style-type: none"> <li>• 50W PA Amplifier for adequate sound reinforcement</li> <li>• System expansion possible through Conference Expansion Unit CMB - 4500</li> <li>• Conference System can be installed in a bus bar arrangement by using junction Boxes CB-45.</li> </ul>   |     |    |  |  |  |  |  |
| 4.                   | <b>Air Conditioner</b> | <ul style="list-style-type: none"> <li>• Capacity: 1.5 Ton(s)</li> <li>• BEE Rating: 5 Star</li> <li>• AC Type: Split</li> <li>• Usage: Lab/Office</li> <li>• Warranty: 1 Year(s)</li> <li>• Noise Level Indoor: 48 DB</li> <li>• Anti Fungus: Yes</li> <li>• Timers: Yes</li> <li>• Auto Restart: Yes</li> <li>• Sleep Mode: Yes</li> <li>• Remote Control: Yes</li> <li>• Air Swing: Yes</li> <li>• Color: White</li> <li>• Tonnage: 1.5- With Inveter</li> </ul> | No. | 6  |  |  |  |  |  |
| 5.                   | <b>Heat Pillar</b>     | Double rod heat pillar 1500 Watts.  | No. | 10 |  |  |  |  |  |
| 6.                   | <b>Exhaust Fan</b>     | 1200mm with grill   | No. | 12 |  |  |  |  |  |
| <b>Total (Lot 1)</b> |                        |   |     |    |  |  |  |  |  |

| <b>Lot No:2</b>              |  |  |                            |                 |                       |                                 |                                       |   |  |
|------------------------------|--|--|----------------------------|-----------------|-----------------------|---------------------------------|---------------------------------------|---|--|
| <b>Lot Name: Trainer kit</b> |  |  |                            |                 |                       |                                 |                                       | <b>Delivery Time (in days): not more than 180</b> |  |
| <b>Item No</b>               | <b>Name of Goods or Related Services</b> | <b>Description</b>   | <b>Unit of Measurement</b> | <b>Quantity</b> | <b>Unit Price INR</b> | <b>Total price per item INR</b> | <b>Sales and other taxes per item</b> | <b>Total Price (Including GST)</b>                | <b>Remarks (Please mention Page Number of detailed information brochure having make and model no.)</b> |
| 1                            | 2  | 3  | 4                          | 5               | 6                     | 7= 5*6                          | 8= 7*@GST%                            | 9=7+8   |  |
| 1                            | <b>Micro-processor 8085 Training Kit</b> | <ul style="list-style-type: none"> <li>• 8085 Microprocessor Training Kit with inbuilt power supply.</li> <li>• Built in assembler</li> <li>• 4K Monitor FIRMWARE, 8K user 6264 (expandable upto 56K)</li> <li>• Battery backup</li> <li>• LCD display (40x2 lines)</li> <li>• 46 parallel I/O, 8155/8255 PPI chip with 26 FRC bus.</li> <li>• Serial I/O</li> <li>• Computer keyboard compatible</li> <li>• 101 PC type keyboard for entering user address/data and for commands.</li> <li>• Software: Terminal emulation, Audio Cassette interface</li> <li>• Supporting software on CD/DVD</li> </ul> | No.                        | 10              |                       |                                 |                                       |   |  |
| 2                            | <b>Micro-processor 8086 Training Kit</b> | <b>Microprocessor 8086 Training Kit</b> <ul style="list-style-type: none"> <li>• Microprocessor Device: 8086 (INTEL)</li> <li>• Operating Frequency: 6.144MHz</li> <li>• Built in assembler</li> <li>• LCD display (40x2 lines)</li> </ul>   | No.                        | 5               |                       |                                 |                                       |   |  |

|   |   |   |     |   |  |  |  |  |  |
|---|---|---|-----|---|--|--|--|--|--|
|   |   | <ul style="list-style-type: none"> <li>• Computer keyboard compatible</li> <li>• 101 PC type keyboard for entering user address/data and for commands.</li> <li>• 8284 clock, 8288 bus controller, 64K RAM, 2x8255 PPI</li> <li>• Availability of Monitor memory storage devices present on microcontroller kit: EEPROM, SRAM for user Data, Battery Backup RAM</li> </ul>  |     |   |  |  |  |  |  |
| 3 | <b>8 bit 1:8- Line Demultiplexer using IC 74138 Trainer Kit</b> | <p><b>Training Board for the study of 1:8 Line Demultiplexer (digital).</b></p> <p>Power Supply : SMPS based +5V DC<br/>         Logic levels : +5V : HIGH (Logic 1)<br/>         0V : LOW (Logic 0)<br/>         Logic Input: 06nos. Through SPDT Switches<br/>         Logic Output: 05nos. Through LEDs.<br/>         LED Indication : LED will be ON (glow) for 1 state and will be OFF for 0 state.<br/>         Banana Sockets for connection: 2mm</p>  | No. | 8 |  |  |  |  |  |
| 4 | <b>Flip Flop Trainer Kit.</b>                                   | <ul style="list-style-type: none"> <li>• Flip Flop trainer kit support to construct J-K Flip flop, R-S Flip flop using NAND gates and to verify their respective truth tables.</li> <li>• Built in fixed power supply +5V @250mA</li> </ul> <p><i>Should be able to construct and Study the following Flip Flops:</i></p> <ul style="list-style-type: none"> <li>• R-S Flip</li> <li>• R-S Flip- Flop using NAND &amp; NOR Gate</li> <li>• R-S Flip- Flop using NAND Gate</li> <li>• J-K Flip – Flop</li> </ul> | No. | 5 |  |  |  |  |  |

|   |   |   |     |    |  |  |  |  |  |
|---|---|---|-----|----|--|--|--|--|--|
|   |   | <ul style="list-style-type: none"> <li>• JK Flip – Flop using RS Flip – Flop</li> <li>• J-K Flip – Flop using NAND Gate</li> <li>• J-K Master Slave Flip-Flop using gates</li> <li>• Master Slave J-K Flip-Flop using IC 7476</li> <li>• D-type Flip – Flop</li> <li>• T-type Flip – Flop</li> <li>• D &amp; T Flip – Flop using RS Flip – Flop</li> <li>• Low and high points using SPDT switches are provided as inputs</li> <li>• LEDs are provided as outputs</li> <li>• Banana Sockets for connection: 2mm</li> <li>• Adequate number of high quality patch cords</li> </ul> |     |    |  |  |  |  |  |
| 5 | <b>Multiplexing of two BCD numbers to seven segment display trainer</b> | <ul style="list-style-type: none"> <li>• Trainer Kit for Multiplexing of two BCD numbers to seven segment display</li> <li>• Built in Power supply</li> <li>• Built in 7 Segment Displays</li> <li>• All requisite accessories and cords.</li> </ul>  | No. | 5  |  |  |  |  |  |
| 6 | <b>Raspberry Pi 3B+ with Power Supply &amp; Case</b>                    | <ul style="list-style-type: none"> <li>• Includes Made in UK Raspberry Pi 3 B+ (B Plus) with 1.4 GHz 64-bit Quad-Core Processor, 1 GB RAM</li> <li>• Dual Band 2.4GHz and 5GHz IEEE 802.11.b/g/n/ac Wireless LAN, Enhanced Ethernet Performance</li> <li>• 16 GB Micro SD Card (Class 10) Pre-loaded with NOOBS, USB MicroSD Card Reader</li> <li>• 2.5 A USB Power Supply with Micro USB Cable - Specially designed for the Raspberry Pi 3 B+</li> <li>• Premium Raspberry Pi 3 B+ Case, High Quality HDMI Cable, 2 x Heat Sinks, GPIO Quick Reference Card</li> </ul>           | No. | 10 |  |  |  |  |  |

|    |  |  |     |   |  |  |  |  |  |
|----|--|--|-----|---|--|--|--|--|--|
|    |  | <ul style="list-style-type: none"> <li>• One Full-Size Large Breadboard</li> <li>• M/M and M/F Jumper Wires = 20 each</li> <li>• Quick-Start Guide</li> <li>• Included power supply and case</li> </ul>  |     |   |  |  |  |  |  |
| 7  | <b>Arduino Uno R3 Board with USB Cable</b> | <b>Arduino Uno R3 ATmega328PU Board</b> <ul style="list-style-type: none"> <li>• Flash Memory: 32 KB (ATmega328)</li> <li>• SRAM: 2 KB (ATmega328)</li> <li>• EEPROM: 1 KB (ATmega328)</li> <li>• Clock Speed: 16 MHz</li> <li>• Digital I/O Pins: 14 (of which 6 provide PWM output)</li> <li>• Input Voltage: 7-12V</li> <li>• Operating Voltage: 5V</li> <li>• USB interface</li> <li>• USB A to B Cable</li> <li>• Included power supply</li> <li>• Quick-Start Guide</li> </ul> | No. | 5 |  |  |  |  |  |
| 8  | <b>HDMI to VGA Converter</b>               | <ul style="list-style-type: none"> <li>• Connectors: Input 1 x HDMI Type A Male, Output 1 x HDB-15 Female</li> <li>• Support video VGA, SVGA, XGA, SXGA, UXGA and resolutions up 1920x1200(PC) /1080p(HDTV)</li> </ul>   | No. | 5 |  |  |  |  |  |
| 9  | <b>HDMI- HDMI Cable 1.8m</b>               | <ul style="list-style-type: none"> <li>• High-Speed HDMI Cable</li> <li>• HDMI A Male to A Male Cable: Supports Ethernet, 3D, 4K video and Audio Return Channel (ARC)</li> <li>• Cable Length: 6 feet (1.8 meters)</li> </ul>  | No. | 5 |  |  |  |  |  |
| 10 | <b>Soldering Station</b>                   | <ul style="list-style-type: none"> <li>• Soldering and de-soldering station</li> <li>• Type: Temperature controlled</li> <li>• Voltage: 220V/50HZ</li> <li>• Max Power Consumption:150 - 300W</li> <li>• Temperature range: 50° C to 450° C</li> <li>• Power cord length (Minimum): 1.2 Mtrs</li> <li>• Iron tip: MT1, conical, 0.125”</li> </ul>  | No. | 7 |  |  |  |  |  |



|                      |                     |  |     |    |  |  |  |  |  |  |
|----------------------|---------------------|--|-----|----|--|--|--|--|--|--|
|                      |                     | <ul style="list-style-type: none"> <li>• Peg hook for hanging the Soldering Iron,</li> <li>• Firm Stand for placing the soldering iron during use with built in Sponge for Tip Cleaning</li> </ul>   |     |    |  |  |  |  |  |  |
| 11                   | <b>Bread Boards</b> | <ul style="list-style-type: none"> <li>• Bread Boards: 800 Tie Points, Self Adhesive</li> <li>• Adhesive sheet on the back side of the board such that multiple breadboards can be spliced together</li> <li>• Should be fit for jumper wire of 0.8 mm diameter - standard 2.54 mm hole spacing</li> <li>• Should be reusable for fast build a prototype of an electronic circuit</li> </ul> | No. | 15 |  |  |  |  |  |  |
| <b>Total (Lot 2)</b> |                     |  |     |    |  |  |  |  |  |  |

|  | <b>Total price per item<br/>(INR)</b><br><br><b>(7= 5*6)</b> | <b>Total Price INR<br/>(Including GST)</b><br><br><b>(9=7+8)</b> |
|--|--|--|
| <b>Grand Total (Lot 1 + Lot 2)</b>           |  |  |
| <b>Grand Total (Without Tax) in Words: -</b> |  |  |
| <b>Grand Total (With Tax) in Words: -</b>    |  |  |

## 2. Delivery and Completion Schedule

The delivery period shall start as of *date of Signing the Contract*

| Item No  | Description of Goods or Related Services | Delivery Schedule (Duration)                      | Location  | Required Arrival Date of Goods or Completion Date for Related Services |
|--|--|---|---|--|
| <b>Package Name: - Consumer Electronics Items</b><br><b>Package No.:- HPSDP-DOTE/WP/10</b> |  |   |   |  |
| <b>Lot - 1</b>   | <b>Consumer electronics items</b>        | Within 180 Days from the Signing of the contract. | <b>Government Polytechnic(Women), Rehan District-Kangra, Himachal Pradesh</b> | Within 180 Days from the Signing of the contract.                      |
| <b>Lot - 2</b>   | <b>Trainer kit</b>                       | Within 180 Days from the Signing of the contract. | <b>Government Polytechnic(Women), Rehan District-Kangra, Himachal Pradesh</b> | Within 180 Days from the Signing of the contract.                      |

### 3. Technical Specifications

#### Lot no. 1 Lot Name: - Consumer electronics items

| Item No. | Name of Goods or Related Services | Technical Specifications of Item and/or Bureau of Indian Standards (BIS) (if applicable) reference  | Features   | Accessories   | Spare parts | Documents  | Installation & Training   | Warranty of Equipment/parts   |
|----------|-----------------------------------|---|--|---|-------------|--|---|---|
| 1.       | <b>Split AC 2.0 Ton</b>           | <ul style="list-style-type: none"> <li>•Capacity: Ton 2.0</li> <li>•Cooling Capacity Nominal (Kcal/hr) 5800</li> <li>•Cooling Cap (min)Guaranteed (Kcal/hr) 5500</li> <li>•Min. Room Discharge AIR flow (Cub. m/hr) 8100</li> <li>•EER (w/w) 2.7Min</li> <li>•Star Rating 3 Star &amp; Above</li> <li>•Power V/Hx/Ph 220-240V / 50Hz 1Ph</li> <li>•Capacity (BTU/hr) 24000</li> <li>•Refrigerant R22. R407C or R410a</li> <li>•Air Flow Volume (m3/h) 1100</li> <li>•Power Consumption 2340 W</li> <li>•Operation Current 10.8 A</li> <li>•Capacity 24000 BTU</li> <li>•Compressor High quality famous brand rotary type compressor</li> <li>•Elegant panel design, with LED/LCD central Display</li> <li>•Galvanized outdoor unit or plastic outdoor unit for anti-corrosion</li> <li>•More than 10 meters remote control distance</li> <li>•Flat panel for easy cleaning, washable plastic filter and horizontal auto louver</li> </ul> | Auto air swing, Air Circulation, Self-diagnosis, Fuzzy logic, Auto restart, Virus and allergy safe filter, Anti-bacterial filter | Voltage Stabilizer, all fitting and installation accessories. | standard    | User Manual, Warranty Certificate, Address of local service centre | <ul style="list-style-type: none"> <li>• To be supplied and installed in the Govt. Polytechnic (Women), Rehan Distt. Kangra HP</li> </ul> | 03 years comprehensive on-site Warranty from the date of Installation |

|    |                       |   |   |  |          |  |   |   |
|----|-----------------------|---|---|--|----------|--|---|---|
| 2. | <b>Vacuum Cleaner</b> | <ul style="list-style-type: none"> <li>• Suction Power 400 Watt</li> <li>• Motor Max. Power 1,400 Watt</li> <li>• Dust Capacity 0.4 Litre</li> <li>• Noise Level (db)</li> <li>• Dust Collection Efficiency 99.8 %</li> <li>• Auto Drive Head</li> <li>• Extendable Multi Angle Wide Brush</li> </ul>   | Multi Angle Head, Flat Mechanism, Quick Dust Disposal, One-Touch Zoom Pipe, Quick Storage, Handy & Easy Control | One-Touch Swivel Brush Quick Carrying Handle Crevice Nozzle Maintenance Brush Other Standard Accessories | standard | User Manual, Warranty Certificate, Address of local service centre | To be supplied and installed in the Govt. Polytechnic (Women), Rehan Distt. Kangra HP | 03 years comprehensive on-site Warranty from the date of Installation |
| 3. | <b>P.A. System</b>    | <ul style="list-style-type: none"> <li>• Highly sensitive 16" long gooseneck microphone for comfortable sharing by two delegates</li> <li>• Bright and clear ring LED indicator</li> <li>• Compact and attractive die case aluminium cabinet in a unique profile</li> <li>• Headphone output available from each unit</li> <li>• Automatic Mic Off feature in Delegate units</li> <li>• Unique Send/Return facility through a stereo jack in Central Amplifier CMA - 4400</li> <li>• Chairman Unit has Priority Switch</li> <li>• Record &amp; playback the messages with the Secretary Unit</li> <li>• AC Mains &amp; 24V DC operation</li> <li>• Central amplifier is 19" rack mountable</li> <li>• Three Mic inputs and one Aux</li> </ul> | standard  | standard   | standard | User Manual, Warranty Certificate, Address of local service centre | To be supplied and installed in the Govt. Polytechnic (Women), Rehan Distt. Kangra HP | 03 years comprehensive on-site Warranty from the date of Installation |

|    |                        |   |   |                                 |          |   |  |             |
|----|------------------------|---|---|---------------------------------|----------|---|--|-------------|
|    |                        | <p>input for various user applications.</p> <ul style="list-style-type: none"> <li>•50W PA Amplifier for adequate sound reinforcement</li> <li>•System expansion possible through Conference Expansion Unit CMB - 4500</li> <li>•Conference System can be installed in a bus bar arrangement by using junction Boxes CB-45.</li> </ul>  |   |                                 |          |   |  |             |
| 4. | <b>Air Conditioner</b> | <p>Capacity: 1.5 Ton(s)<br/>         BEE Rating: 5 Star<br/>         AC Type: Split<br/>         Usage: Home<br/>         Warranty: 1 Year(s)<br/>         Noise Level Indoor: 48 DB<br/>         Anti Fungus: Yes<br/>         Timers: Yes<br/>         Auto Restart: Yes<br/>         Sleep Mode: Yes<br/>         Remote Control: Yes<br/>         Air Swing: Yes<br/>         Color: White<br/>         Tonnage: 1.5- With Inverter</p> | <p>- Low maintenance</p> <p>-Sturdy construction</p> <p>-Corrosion-resistance</p> | All the accessories .(Complete) | Standard | <p>User/Operating Manual<br/>         - List of Service Centres in India<br/>         - Warranty Certificates<br/>         -Test Certificate from Competent Authority</p> | <p>- To be installed at Govt Polytechnic (Women) Rehan in Himachal Pradesh</p> | One Year    |
| 5. | <b>Heat Pillar</b>     | Double rod heat pillar 1500 watt  | Standard(ISI Brand)   | Standard                        | Standard | Standard  | To be installed at Govt Polytechnic (Women) Rehan in Himachal Pradesh          | Three Years |
| 6. | <b>Exhaust Fan</b>     | 1200mm with grill.  | Standard(ISI Brand)   | Standard                        | Standard | Standard  | To be installed at Govt Polytechnic (Women) Rehan in Himachal Pradesh          | Three Years |

**Lot no: - 2 Lot Name: - Trainer kit**

| Item No. | Name of Goods or Related Services        | Technical Specifications of Item and/or Bureau of Indian Standards (BIS) (if applicable) reference   | Features          | Accessories | Spare parts | Documents   | Installation & Training  | Warranty of Equipment/ parts   |
|----------|--|--|-------------------|-------------|-------------|---|--|--|
| 1.       | <b>Micro-processor 8085 Training Kit</b> | <ul style="list-style-type: none"> <li>• 8085 Microprocessor Training Kit with inbuilt power supply.</li> <li>• Built in assembler</li> <li>• 4K Monitor FIRMWARE, 8K user 6264 (expandable upto 56K)</li> <li>• Battery backup</li> <li>• LCD display (40x2 lines)</li> <li>• 46 parallel I/O, 8155/8255 PPI chip with 26 FRC bus.</li> <li>• Serial I/O</li> <li>• Computer keyboard compatible</li> <li>• 101 PC type keyboard for entering user address/data and for commands.</li> <li>• Software: Terminal emulation, Audio Cassette interface</li> <li>• Supporting software on CD/DVD</li> </ul> | Standard Features | standard    | standard    | <ul style="list-style-type: none"> <li>• User Manual of 8085 processor kit</li> </ul> | <ul style="list-style-type: none"> <li>• To be supplied and installed at the Govt Polytechnic (Women) Rehan in Himachal Pradesh</li> <li>• Training to be provided as required by the users</li> </ul> | <ul style="list-style-type: none"> <li>• 03 year comprehensive on-site warranty from the date of Installation</li> </ul> |
| 2.       | <b>Micro-processor 8086 Training Kit</b> | <p><b>Microprocessor 8086 Training Kit</b></p> <ul style="list-style-type: none"> <li>• Microprocessor Device: 8086 (INTEL)</li> <li>• Operating Frequency: 6.144MHz</li> <li>• Built in assembler</li> <li>• LCD display (40x2 lines)</li> <li>• Computer keyboard compatible</li> <li>• 101 PC type keyboard for entering user address/data and for commands.</li> <li>• 8284 clock, 8288 bus controller, 64K RAM, 2x8255 PPI</li> <li>• Availability of Monitor memory storage devices present on microcontroller kit:</li> </ul>   | Standard Features | standard    | standard    | <ul style="list-style-type: none"> <li>• User Manual of 8086 processor kit</li> </ul> | <ul style="list-style-type: none"> <li>• To be supplied and installed at the Govt Polytechnic (Women) Rehan in Himachal Pradesh</li> <li>• Training to be provided as</li> </ul>                       | <ul style="list-style-type: none"> <li>• 03 year comprehensive on-site warranty from the date of Installation</li> </ul> |

|    |   |   |          |  |          |                           |   |          |
|----|---|---|----------|--|----------|---------------------------|---|----------|
|    |   | EEPROM, SRAM for user Data, Battery Backup RAM  |          |  |          |                           | required by the users   |          |
| 3. | <b>8 bit 1:8- Line Demultiplexer using IC 74138 Trainer Kit</b> | <p><b>Training Board for the study of 1:8 Line Demultiplexer (digital).</b><br/> Power Supply : SMPS based +5V DC<br/> Logic levels : +5V : HIGH (Logic 1)<br/> 0V : LOW (Logic 0)<br/> Logic Input: 06nos. Through SPDT Switches<br/> Logic Output: 05nos. Through LEDs.<br/> LED Indication : LED will be ON (glow) for 1 state and will be OFF for 0 state.<br/> Banana Sockets for connection: 2mm</p>  | standard | Operating manual, Patch Cards adequate number of patch cards | standard | Standard Operating manual | <ul style="list-style-type: none"> <li>To be supplied and installed at the Govt Polytechnic (Women) Rehan in Himachal Pradesh</li> <li>Training to be provided as required by the users</li> </ul>  | standard |
| 4. | <b>Flip Flop Trainer Kit.</b>                                   | <ul style="list-style-type: none"> <li>Flip Flop trainer kit support to construct J-K Flip flop, R-S Flip flop using NAND gates and to verify their respective truth tables.</li> <li>Built in fixed power supply +5V @250mA</li> </ul> <p><i>Should be able to construct and Study the following Flip Flops:</i></p> <ul style="list-style-type: none"> <li>R-S Flip</li> <li>R-S Flip- Flop using NAND &amp; NOR Gate</li> <li>R-S Flip- Flop using NAND Gate</li> <li>J-K Flip – Flop</li> <li>JK Flip – Flop using RS Flip – Flop</li> <li>J-K Flip – Flop using NAND Gate</li> <li>J-K Master Slave Flip-Flop using gates</li> </ul> | standard | Operating manual, adequate number of patch cards             | standard | Standard Operating manual | <ul style="list-style-type: none"> <li>To be supplied and installed at the Govt Polytechnic (Women) Rehan in Himachal Pradesh.</li> <li>Training to be provided as required by the users</li> </ul> | standard |



|    |   |   |                   |   |          |                           |  |          |
|----|---|---|-------------------|---|----------|---------------------------|--|----------|
|    |   | <ul style="list-style-type: none"> <li>• Master Slave J-K Flip-Flop using IC 7476</li> <li>• D-type Flip – Flop</li> <li>• T-type Flip – Flop</li> <li>• D &amp; T Flip – Flop using RS Flip – Flop</li> <li>• Low and high points using SPDT switches are provided as inputs</li> <li>• LEDs are provided as outputs</li> <li>• Banana Sockets for connection: 2mm</li> <li>• Adequate number of high quality patch cords</li> </ul> |                   |   |          |                           |  |          |
| 5. | <b>Multiplexing of two BCD numbers to seven segment display trainer</b> | <ul style="list-style-type: none"> <li>• Trainer Kit for Multiplexing of two BCD numbers to seven segment display</li> <li>• Built in Power supply</li> <li>• Built in 7 Segment Displays</li> <li>• All requisite accessories and cords.</li> </ul>  | standard          | Operating manual, Patch Cards adequate number of patch cards              | standard | Standard Operating manual | <ul style="list-style-type: none"> <li>• To be supplied and installed at the Govt Polytechnic (Women) Rehan in Himachal Pradesh</li> <li>• Training to be provided as required by the users</li> </ul> | standard |
| 6. | <b>Raspberry Pi 3B+ with Power Supply &amp; Case</b>                    | <ul style="list-style-type: none"> <li>• Includes Made in UK Raspberry Pi 3 B+ (B Plus) with 1.4 GHz 64-bit Quad-Core Processor, 1 GB RAM</li> <li>• Dual Band 2.4GHz and 5GHz IEEE 802.11.b/g/n/ac Wireless LAN, Enhanced Ethernet Performance</li> <li>• 16 GB Micro SD Card (Class 10) Pre-loaded with NOOBS, USB MicroSD</li> </ul>   | Standard features | <ul style="list-style-type: none"> <li>• Power supply and case</li> </ul> | standard | Standard Operating manual | <ul style="list-style-type: none"> <li>• To be supplied and installed at the Govt Polytechnic (Women) Rehan in</li> </ul>  | standard |

|    |  |   |                         |          |          |                           |   |          |
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|    |  | <ul style="list-style-type: none"> <li>Card Reader</li> <li>2.5 A USB Power Supply with Micro USB Cable - Specially designed for the Raspberry Pi 3 B+</li> <li>Premium Raspberry Pi 3 B+ Case, High Quality HDMI Cable, 2 x Heat Sinks, GPIO Quick Reference Card</li> <li>One Full-Size Large Breadboard</li> <li>M/M and M/F Jumper Wires = 20 each</li> <li>Quick-Start Guide</li> <li>Included power supply and case</li> </ul>                            |                         |          |          |                           | Himachal Pradesh  |          |
| 7. | <b>Arduino Uno R3 Board with USB Cable</b> | <b>Arduino Uno R3 ATmega328PU Board</b> <ul style="list-style-type: none"> <li>Flash Memory: 32 KB (ATmega328)</li> <li>SRAM : 2 KB (ATmega328)</li> <li>EEPROM: 1 KB (ATmega328)</li> <li>Clock Speed: 16 MHz</li> <li>Digital I/O Pins: 14 (of which 6 provide PWM output)</li> <li>Input Voltage: 7-12V</li> <li>Operating Voltage: 5V</li> <li>USB interface</li> <li>USB A to B Cable</li> <li>Included power supply</li> <li>Quick-Start Guide</li> </ul> | USB Cable, power supply | standard | standard | Standard Operating manual | <ul style="list-style-type: none"> <li>To be supplied and installed at the Govt Polytechnic (Women) Rehan in Himachal Pradesh.</li> <li>Training to be provided as required by the users</li> </ul> | standard |
| 8. | <b>HDMI to VGA Converter</b>               | <ul style="list-style-type: none"> <li>Connectors: Input 1 x HDMI Type A Male, Output 1 x HDB-15 Female</li> <li>Support video VGA, SVGA, XGA, SXGA, UXGA and resolutions up 1920x1200(PC) /1080p(HDTV)</li> </ul>  | standard                | standard | standard | Standard Operating manual | <ul style="list-style-type: none"> <li>To be supplied and installed at the Govt Polytechnic (Women) Rehan in Himachal</li> </ul>  | standard |

|     |                              |   |          |          |          |                           |   |          |
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|     |                              |   |          |          |          |                           | Pradesh.<br>• Training to be provided as required by the users  |          |
| 9.  | <b>HDMI- HDMI Cable 1.8m</b> | <ul style="list-style-type: none"> <li>• High-Speed HDMI Cable</li> <li>• HDMI A Male to A Male Cable: Supports Ethernet, 3D, 4K video and Audio Return Channel (ARC)</li> <li>• Cable Length: 6 feet (1.8 meters)</li> </ul>   | standard | standard | standard | Standard Operating manual | <ul style="list-style-type: none"> <li>• To be supplied and installed at the Govt Polytechnic (Women) Rehan in Himachal Pradesh.</li> <li>• Training to be provided as required by the users</li> </ul> | standard |
| 10. | <b>Soldering Station</b>     | <ul style="list-style-type: none"> <li>• Soldering and de-soldering station</li> <li>• Type: Temperature controlled</li> <li>• Voltage: 220V/50HZ</li> <li>• Max Power Consumption:150 - 300W</li> <li>• Temperature range: 50° C to 450° C</li> <li>• Power cord length (Minimum): 1.2 Mtrs</li> <li>• Iron tip: MT1, conical, 0.125”</li> <li>• Peg hook for hanging the Soldering Iron,</li> <li>• Firm Stand for placing the soldering iron during use with built in Sponge for Tip Cleaning</li> </ul> | standard | standard | standard | Standard Operating manual | <ul style="list-style-type: none"> <li>• To be supplied and installed at the Govt Polytechnic (Women) Rehan in Himachal Pradesh.</li> <li>• Training to be provided as required by the users</li> </ul> | standard |

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| 11. | <b>Bread Boards</b> | <ul style="list-style-type: none"> <li>• Bread Boards: 800 Tie Points, Self Adhesive</li> <li>• Adhesive sheet on the back side of the board such that multiple breadboards can be spliced together</li> <li>• Should be fit for jumper wire of 0.8 mm diameter - standard 2.54 mm hole spacing</li> <li>• Should be reusable for fast build a prototype of an electronic circuit</li> </ul> | standard | standard | standard | Standard Operating manual | <ul style="list-style-type: none"> <li>• To be supplied and installed at the Govt Polytechnic (Women) Rehan in Himachal Pradesh.</li> <li>• Training to be provided as required by the users</li> </ul> | standard |
|-----|---------------------|--|----------|----------|----------|---------------------------|---|----------|

## 4. Drawings

*Not Applicable*