

PURCHASE ORDER

Reference No: **TEQIP-III/2018/geca/Shopping/13**
GECA | TEQIP-III | 2018 | 338

Date of Issue: **16-Jul-2018**

Subject: **GECA/TEQIP-III/2017-18/ECE-ELECTRONIC
INSTRUMENT WORKSHOP**

Purchaser: **Government Engineering College, Ajmer
N.H.8 , BARLIYA CIRCLE, NEAR NARELI TEMPLE,
AJMER**

Supplier Name: **Vinytics Peripherals Pvt. Ltd.
WB-10, Shakarpur, Delhi, 110092**

With reference to our correspondence, **Government Engineering College, Ajmer** is pleased to award this detailed Purchase Order to **Vinytics Peripherals Pvt. Ltd. , Delhi** for supply of items as per the details given below at a total cost of **328158.00 (Three Lakh Twenty Eight Thousand One Hundred & Fifty Eight Only)**:

Sr.	Item Name	Quantity	Unit Cost (Rs.)	Total Cost (Rs.)	Delivery Period
1	DVD Player Demonstration kit	1	9900	9900	45
2	LCD TV Demonstration kit	1	16000	16000	45
3	LED TV Demonstration kit	1	16500	16500	45
4	Opto-Electronic devices Characteristics Trainer kit	1	4500	4500	45
5	PCB Fabrication setup	1	174000	174000	45

9	Transistor radio FM kit	1	4800	4800	45
8	Transistor radio AM kit	1	8500	8500	45
7	Soldering desoldering station	2	17000	34000	45
6	Public address System	1	9900	9900	45

Total price (without taxes) : Rs. 278100.00
 Total applicable taxes : 18 %
 Total price (with taxes) : Rs. 328158.00
 Total Octroi : Rs.

Delivery : Government Engineering College, Ajmer

Testing/Installation Clause (if any) :

On Site installation testing and training required. Price must be included in quotation

Training Clause (if any) : Training Required

Technical Specifications : As per Annexure - 1

Delivery Period : As specified for each item from date of issue of confirmed purchase order or as early as possible.

Warranty : 12

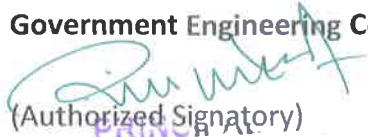
Payment Terms :

Delivery and Installation - 90% of total cost

Satisfactory Acceptance - 10% of total cost

For

Government Engineering College, Ajmer



(Authorized Signatory)

Government Engineering College,
Name & Designation
AJMER

Accepted by

Signature

Date

Address

Annexure I

Sr.	Name	Specifications
1	DVD Player	Signal System : PAL/NTSC Playable Discs formats : DVD+R/RW; Audio CD; CD-R/RW (All 8 cm/12 cm discs) File Compatibility : .avi/.mpg/.mpeg/.mp3/.wma/.jpg/.jpeg Sampling frequency : 8 to 48 KHz (MP3), 32 to 48 KHz (WMA) Bit Rate : 8 to 320 kbps (MP3), 32 to 190 kbps (WMA) LASER : Semiconductor LASER LASER Wave Length : 650/635 nm Modulation : EFM On-Screen Display : Title number, Chapter number, Playing time, Channel, Language, Subtitle, Angle Video Output : 1.0V (p-p), 75 ohm, Sync negative, RCA jack x 1 Audio Output : 2.0Vrms (1 KHz, 0dB), 600 ohm RCA jack (L/R) x 1 Panel Control : Power On/Off, Open/Close, Play/Pause Remote Control Battery : 1.5V, (R03, AAA size) USB Reader : 1 X USB 2.0 Power Supply : AC 110-240V 50/60Hz Power Consumption : 11W Bus Power Supply (USB) : DC 5V, 500 mA Product Tutorials : Online (Theory, procedure, reference, results etc) Included Accessories : Mains Cord, Remote, Pencil Cell, A/V Cable, DVD
2	LCD TV	Display Type : LCD, HD Screen Size : 21 Inch (53cm) Display Resolution : 1280(H) X 1024(V) pixels Contrast Ratio : Dynamic Contrast Ratio (1000:1) Brightness : 400 cd/m ² brightness Viewing Angle : 160(H) X 160(V) Refresh Rate : 60 Hz Video Interface : Video Input/ VGA input Audio Interface : RCA L & R Audio Output Power : 5W X 2 Receiving System : PAL BG/I/DK and NTSC Channel Coverage : VHF-2-12; UHF21-69; CATV (X~Z+2, S11S41) Antenna Input Impedance : 75 Ω unbalanced Application : Color Television/ PC Monitor Connectivity : USB : 1 X USB 2.0 (MPEG, JPEG, MP3) Other Connectivity : HDMI, RF In, AV In, VGA In, VGA Audio In Composite A/V : Component Video Test Points : More than 40 Switched Faults : More than 40 Remote Battery : UM-4, "AAA" 1.5V (2 no.) Power Supply : AC 110~230V, 50Hz
3	LED TV	Display Type : LED, HD Technical Specifications : Display : LED, HD Power Supply : AC 110~230V, 50Hz Remote Battery : UM-4, "AAA" 1.5V (2 no.) Switched Faults : More than 40 Test Points : More than 40 Analog Audio : Composite A/V : Component Video Other Connectivity : HDMI, RF In, AV In, VGA In, VGA Audio In USB : 1 X USB 2.0 (MPEG, JPEG, MP3) Connectivity : Application : Color Television/ PC Monitor Antenna Input Impedance : 75 Ω unbalanced Channel Coverage : VHF-2-12; UHF21-69; CATV (X~Z+2, S11S41) Receiving System : PAL BG/I/DK and NTSC Audio Output Power : 5W X 2 Audio Interface : RCA L & R Video Interface : Video Input/ VGA input Refresh Rate : 60 Hz Viewing Angle : 160(H) X 160(V) Brightness : 400 cd/m ² brightness Contrast Ratio : Dynamic Contrast Ratio (1000:1) Display Resolution : 1280(H) X 1024(V) pixels Screen Size : 21 Inch (53cm) Display Type : LCD, HD

	ion kit	<p>Screen Size : 20 Inch (50cm) Display Resolution : 1600 X 900 pixels Display Color : 16.7 Million Display Colors Viewing Angle : 170 (H) X 170(V) Refresh Rate : 50 Hz Video Interface : Video Input/ VGA input Audio Interface : RCA L & R Audio Output Power (RMS) :8W X 2 Receiving System : PAL BG/I/DK and NTSC Channel Coverage : VHF- 2-12; UHF21-69; CATV (X~Z+2, S11S41) Antenna Input Impedance : 75? unbalanced Application : Color Television/ PC Monitor</p> <p>Connectivity</p> <p>USB : 1 X USB 2.0 (MPEG, JPEG, MP3) Other Connectivity : HDMI, RF In, AV In, VGA In, VGA Audio In Composite A/V : Component Video Analog Audio</p> <p>Test Points : More than 50 Switched Faults : More than 40 Remote Battery : UM-4, "AAA" 1.5V (2 no.) Power Supply : AC 110~230V, 50Hz</p>
4	Opto-Electronic devices Characteristics Trainer kit	<p>Inbuilt Variable DC regulated power supply</p> <ul style="list-style-type: none"> •Output Voltage: 0-3VDC On Board Digital Meters •Voltmeter : 0-3VDC •Ammeter : 0-50MicroADC/0-5mA (Dual Range).Diode & Components Provided •Phototransistor •Photo diode •LDR •High quality Aluminum front panel mounted on light weight shock proof plastic cabinet •Symbol diagram printed on Aluminum Front Panel <ul style="list-style-type: none"> • all important test Points should be brought out on front panel •Power requirement: 230 VAC 10%, 50Hz •Weight: 1.5 Kg Approx. •Dimensions (mm): 300(L) x 175(B) x 75(H)
5	PCB Fabrication setup	<p>(1) PCB Curing machine (Oven)</p> <ul style="list-style-type: none"> • Tabletop unit for curing of liquid photoresist. • Timer controlled heating system for fast and efficient PCB curing. • PCB Size : 250mm x 300mm (10' x12"). • Heating : Heaters with thermostat controls • Timers : Preset timer • Electrical Power: 230V / 50Hz. 5A Socket <p>(2) PHOTO RESIST DIP COATING MACHINE</p> <ul style="list-style-type: none"> • The Machine should be table top and compact. • A single Operation unit for coating of laminates with Photoresist. • The machine ensures uniform controlled thickness of Photoresist on copper clad • Max Board size - 250mm x 300mm (10 x 12") • Rectangular Tank Capacity : 2 litres • Dips one PCB at a Time • Electrical Power: 230V/50Hz, 5A Socket <p>(3) DOUBLE SIDED U.V.EXPOSURE UNIT</p> <ul style="list-style-type: none"> • A tabletop double sided exposing unit for high resolution exposure of PCBs. • Maximum Size : 300mm x 255mm (12" x 10")

• U.V. Tubes : 2 x 4 (10 Watts) actinic tubes with single/double side option

• U.V. Tube Size : 12 " (300 mm)

• Chokes : Electronic Type

• Timer : 0 - 10 minutes

• Electrical Power : 230 V -50Hz, 5A Socket

(4) PROTO-ETCH ETCHING MACHINE

• For fast single and double sided PCB etching

• Useful etching area : 250mm x 300mm (10' x12").

• Tank Capacity : 20 Litres. Includes a heater and air flow

• compressor. All construction materials are corrosion free.

• Heater : Titanium – non corrosive with thermostat control

• Timer : 0 - 4.0 minutes

• Electrical Power : 230V/50Hz, 5A Socket

(5) PCB DRILLING MACHINE

• A compact tabletop High speed PCB drilling machine with a Quick Change Chuck

• Drill holding by precision chuck with lapped jaws

• Mains operated DC motor – Direct drive (no belt and pulley)

• 3 Step Speed Control

• Illumination of Work Area

• Motor Speed : upto 20,000 R.P.M.

• Range : 0.6 to 3.0 mm

• Base : Metal

• Electrical Power: 230V/50Hz, 5A Socket

(6) PCB SHEARING MACHINE -

• Benchtop Guillotine type shearing machine to cut PCB's and Laminates.

• Compact structure with central handle allows ease of cutting.

• Width : 300mm (12 ")

• Size : 400mm X 350mm

(7) ROLLER TINNING MACHINE –

• A tabletop unit for Tin/Solder coating of PCB's.

• A hand operated flywheel for easy coating of boards.

• Maximum PCB Width : 250mm (10")

• Maximum PCB Thickness:6 mm

• Solder Bath Capacity : 5 Kgs.

• Heaters : 2 x 500 Watts

• Rollers : Silicon Coated

• Roller Revolution: Gear Flywheel Drive

• Bearings : Teflon

• Electrical Power : 230 V - 50Hz, 5A Socket

(8) MACHINE FOR DYE/DEVELOPER (2 in 1 Unit)

• Max. PCB Size: 250mm x 300mm (10" x 12")

• Tank Capacity: 2 Ltr. for Developer solution

• 2 Ltr. for Dye solution.

• Air pump: Diaphragm type compressor pump

• Mechanical Timer: 0-4 min. to operate air pump

(9) CHEMICALS FOR THE ABOVE MACHINES

• Board Preparation & Cleaning

• (1) Single Sided PCB Laminate Nos 10 (2) Paper Phenolic 300x 300mm(1x1 feet)

• II For Dark Room

• 1) Safe Lamp Unit 1

• 3) Lith Film Developer A&B(5 Ltrs) Pkt 1

• (2) Lith Film 250 x 300mm(10 x 12") Nos 10

		<p>4) Lith Film Fixer Bottle 1 (5) Developing Trays Nos 3</p> <p>III For Photoresist Dip Coating machine 1) Liquid Photoresist Litres 2 (2) Photoresist Thinner Litre 1 3) Photoresist Developer Litre 5 (4) Photoresist Dye Litre 5 5) Jars Nos 2</p> <p>IV For Etching Machine 1) Etching Crystals Kgs 10</p> <p>V For PCB Drilling Machine Drill Bits (1) 0.80mm Nos 50 (2) 1.00mm Nos 50</p> <p>VI For Roller Tin Machine 1) Solder 63:37 Kgs 5 (2) Roll Salt Kgs 2 (3) Flow Coat Litres ½</p> <p>(10) PCB Design Facility (1) PCB Drafting Aids Kit Tapes, pad and other materials for making PCB Artworks for making PCBs. (2) ARTWORK TABLE (Illuminated) Tabletop artwork and PCB inspection table with bottom illumination and diffused light. Area for work: 20" X 24"</p>
6	Public address System	<p>Trainer should have following features:</p> <ul style="list-style-type: none"> • Superior quality 100W high power Public Address System • Bass and Treble tone controls with Master control • Complete block diagram of a Public Address System on-board • The different circuit boards of Public Address System should be exposed on a PCB • 3 Speaker outputs (4 /8 /16 Ohm) • 5 Mic and 2 Aux Inputs • Easy identification of different parts and components of the system at a glance • Easy measurement of voltages and observation of waveforms on test points • Soldering free Fault creation and troubleshooting <p>Technical Specifications :</p> <ul style="list-style-type: none"> • Power Output : 100W RMS at 10% THD • Pre-amplifier Output : 200mV • Line output : 1V/ 1KΩ • Input Channels : Mic: 5nos; 0.65mV/ 4.7K • Aux : 2 nos; 50 mV & 150 mV/470K • Frequency Response : 65 Hz to 15 KHz +/- 3dB • Tone Controls : Bass, Treble, Master Control • Speaker Outputs : 4 , 8 , 16 , 70-100V Line Matching • Speakers : 2 nos • Microphones : 2 nos (Dynamic) • Mains Supply : 230V AC ± 10%, 50/60Hz • Included Accessories : Mains cord 1 no Microphone 2 nos Speaker 2 nos
7	Soldering desoldering station	<ul style="list-style-type: none"> • Soldering : Power consumption :60W Input Voltage :190 to 290 V AC • Temperature range :180 to 270 V (180 to 480°C) • Temperature stability :±10°C • Temperature accuracy :±1°C of tolerance at idling time • Tip to ground potential : under 2 mV • Tip to ground resistance :under 2Ω • Desoldering: Desold : 70 watts Input : 170 to 270 V (190 to 290V AC) Temperature range : 180 to 480°C Pump : diaphragm type

		<p>Vacuum : 600 mm/Hg</p> <ul style="list-style-type: none"> For SMD Rework <ul style="list-style-type: none"> Power consumption : 270W Air pump : diaphragm pump Capacity : 24L/min Hot air temperature : 200 to 550°C Temperature accuracy : ±1°C
8	Transistor radio AM kit	<p>Construction : Superhetrodyne Frequency Range : 980 KHz to 2060 KHz Intermediate Frequency : 455 KHz Input Circuits : 1) RF Amplifier (2) Mixer (3) Local Oscillator (4) Beat Frequency Oscillator (5) IF Amplifier 1 (6) IF Amplifier 2 Tuning : With variable capacitor (ganged) Dial marking on board Receiving media : Telescopic antenna / Cable Detectors: (1) Diode detector (for DSB) (2) Product detector (for SSB) Audio Output : Amplifier with speaker Automatic Gain Control : Switchable Switched Faults : 8 nos. Interconnections : 2 mm Banana sockets Test points : 30 nos. Power Supply : 110-220 V AC ±10%, 50/60Hz Power Consumption : 3 VA approximately o Operating Conditions : 0-40 C, 80% RH Dimensions (mm) : W 326 × D 252 × H 52 Weight : Less then 2.5Kg Product Tutorial : Online (Theory, procedure, reference results, etc). Accessories : Patch cord 16" : 2 nos. TechBook Power Supply, Mains cord, Earphone:1 no.</p>
9	Transistor radio FM kit	<p>Audio Construction : Superheterodyne FM Frequency Band : 88 MHz to 108 MHz Tuning Range : 96 MHz to 120 MHz IF Frequency : 10.7 MHz Input Circuit : 1. RF amplifier 2. Mixer 3. Local oscillator 4. IF amplifier 1 5. IF amplifier 2 6. FM Detector 7. Automatic Frequency Control Audio Output : Amplifier with speaker Tuning : Variable capacitor (ganged) dial marking on board Receiving media : Telescopic antenna / RF cable Switched Faults : 12 Nos Test Points : 50 Nos Power Supply : 110-220 V AC ±10%, 50/60Hz Power Consumption : 3VA (approximately) Interconnections : 12mm Banana sockets Operating Conditions : 0-40 C, 80% RH Dimensions (mm) : W 326 × D 252 × H 52 Weight : 3 Kg approximately Included Accessories : Patch Cord : 20 Nos Mains Cord : 1 No Earphone : 1 No TechBook Power Supply : 1 No</p>