GOV NMENT WOMEN ENGINEERING COLLEGE, , , MER PROCURMENT PLAN 2017-2019 UNDER TEQIP-III

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30/00	7							Goods													Item Category Goods
-0	1)						Equipment													Irem Sub Category (Equipment/ Books & LRs /Furniture etc)
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	617							One Month													Estimated Financial Sauction Date
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Analog Electronics Lab Trainer with ready to use board for Experiments on Analog electronics Simulation & Teaching software	Kit to plot the characteristics of MOSFET and	Kit to plot the characteristics of UJT	K-derived filters (LP/HP)	Harrier-coloitt oscillator kit	Wein onage oscillator kit	Kit to study the push pull amplifiers	Kit to study and plotting the characteristics of small signal amplifier using FET	Kit to study the series and shumt voltage regulators and to measure the line and load regulation with ripple factor	Kit for plotting the gain frequency characteristics of a BJT amplifier with and without negative feedback	Kit to study the working of bridge rectifier and to measure the effect of filters on the rectifier current.	Kit to study the half wave rectifier and to measure the effect of filters on the rectifier output	Kit for plotting the input-output characteristics of BJT in CB, CC, and CE confluentions	Kit for plotting the gain-frequency characteristics of emitter follower and to find output resistance	Kit for plotting the gain-frequency characteristics of two-stage RC coupled annelifier	Diode clipper & clamper kit	Kit for plotting the drain current-drain voltage and drain current-gate bias characteristics of field effect transistor(FET)	Kit for plotting the frequency response Curve of single stage amplifier and to determine the unit bandwidth product	Zener diode and its use as a voltage regulator	P-N Junction Kit		Item Name
Analog Electronics Lab Trainer with ready to use board for Experiments on Analog electronics Simulation & Teaching software	Kit of MOSFET and CMOS		K-derived filters (LP/HP)	Harriev-colpits oscillator kit	Wem pringe excurator sit	The push pull amplifiers		The series and shunt voltage regulators and to measure the line and load regulation with ripple factor	Gain frequency characteristics of a BJT amplifier with and without negative feedback	Bridge rectifier and to measure the effect of filters on the rectifier output	Half wave rectifier and to measure the effect of filters on the rectifier output	The input-output characteristics of BJT in CB, CC, and CE configurations	Gain-frequency characteristics of emitter follower and to find out the input and output resistance	Gain-frequency characteristics of two-stage RC coupled amplifier	Diode clipper & clamper kit	Drain current-drain voltage and drain current-gate bias characteristics of field effect transistor(FET)	Frequency response Curve of single stage amplifier and to determine the gain bandwidth product	Reverse bias(breakdown) characteristics of a zener diode	Reverse bias characteristics of a germanium/silicon semiconductor diode		Item Description/ Specification
on	4.	die	-ta	4		- 4	4-	4	.0-	4	-4-	AFA.	μÞ-	4.	4	4	44	4	4.		Item Quantity
0.3	0.1	0.1	0.1	0.1	0.1	0.1	0.1	6.1	2	0.1	0.1	0.1	0.1	8"	0.1	0.1	1.0	0.1	0.1		Item Estimated Cost Per Unit
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and the state of t	-							lab (Annexure 1)	for Upgradation of existing												Justification

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Error Detection and Correction Cyclic Codes	Delta, Adaptive Delta, Sigma Delta Modulator & Demodulator	Carrier Demodulation and Data Reformatting Receiver	Data Formatting and Carrier Modulation Transmitter	Block Godes	ASK, FSK, BPSK, DBPSK Modulator & Demodulator	DSB-AM Modulation & Demodulation	Working bench for calibration of Energy meter and phantom loading	Strain Gauge Trainer	Slide Wire Potentiometer setup	Temperature Sensor Trainer	LVDT Trainer	Utrasonic Distance Measurement Trainer	Wein's Bridge	(B) Maxwell Bridge	Anderson Bridge (A)	Qmeter	Measurement of Earth Resistance Trainer using fall of potential	RF Components		INSTRUMENTS	INSTRUMENTS	INSTRUMENTS	INSTRUMENTS	Additional ready to use boards to be atrached with analog Trainer
CRC Encoder / Decoder And MSK Modulation/Demodulation kit , Detail mentioned in Annextre S			Data Conditioning And Reconditioning Kit, Detail mentioned in Annexure 5	CRG Encoder / Decoder And MSK Modulation/Demodulation kit , Detail mentioned in Anneouse 5	ASK /PSK / FSK Modulation and Demodulation Kit, Detail mentioned in Annexure 5	Amplitude Modulation Transmitter Kit, Detail mentioned in Annexure 5	calibration of single phase energy meter, 15 A variac, rheostat 10 amp 10 ohm, for more detail see Annexure-4	PIC 18F452 Microcontroller based system, for more detailed Annexure-4	10 meter resistive wire wounded on wooden board., for more detail see Annewire-4	PIC 18P452 Microcontroller based system, Test-Points to Observe Input Output Multiple sensors facility , for more detail one American	PIC 18F452 Microcontroller based system, Test points for lest Lest Lett calibration using Multimeter, for more detail see	PIC 18F452 Microcontroller based system with memory card for data storage facility. for more detail see Annexure-4	Wein's Bridge for unknown frequency & capacitance measurement, for more detail see Annewire-4	Maxwell Bridge for unknown inductance, for more detail see Annexure-4	Anderson's Bridge for unknown inductance measurement, for more detail see Annexure-4	Digital display 8 digit LED 0.8" height, range indicator, 999 count and status indicators via 3 LEDs, Working temperature 0 to 40°C, , for more detail see Annexure-4	An exclusive training system showing in details the principle of fall of potential between two stationary and one moving electrode to find our resistance of earth. Detail mentioned in Anneques 4	Rotor tables, pair of L-band, S-band, C-band, Kn-band, Kn-band, Ka-band horn antennas, standard Horn antenna up to 18 GHz etc.	Based on 8085 CPU operating at 6,144 MHz., 8K bytes of EPROM Monitor, 8K bytes of RAM with Battery Backup using NICD Battery, On-board one memory expansion up to 64KB, etc., as mentioned in detail Annexure -3	DIGITAL MULTIMETER	DSO SO MEZ	Dual Channet Adjustable Regulated Fower Supply (5 A) shall have following specifications:	30 MHz DUAL CHANNEL CATHODE RAY DSCILLOSCOPE	Additional ready to use wards to be attached with analog I Trainer, Various Amplifier, Diode, Zener Diode & LED Zener, Diode as Clipper, Diode as Clamper, Transistor, Oscillator, filter etc. as mentioned in Annexure-1
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0.225	0.165	0.165	0.165	0.225	0.39	0.33	0.42	0.14	0.15	0,156	0.144	0,17	0.215	0.215	0.215	0.12	0.15	125	0.1	0.05	05	2	03	0.05
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DCMOTORSPEED CONTROL TRAINER
PAM-PPM-PWM Modulation- Demodulation Techniques PCM Generation & Demodulation using CODEC Chin PCM, DPCM Modulator & Demodulator Sampling & Reconstruction Technique TDM - PAM Transmitter Receiver TDM Pulse Code Modulator & Transmitter Four Channel Analog TDM System Transmission Line Trainer Digital Trainer Kit (Analog-Digital Circuits Development Platform) Counters and shift registers kit SOP and POS Implementation Kit Control Speed of a single-phase induction Transmist on trialer Reculators Various type of flip flop Multiplexer & Demultiplexer kit SCR VI CHARACTERISTICS STUDY TRAINER R. RC & UTI FIRING MODULE Study and test AC voltage regulators using triac, anti parallel thyristors and triac & diac. DC Chopper Trainer Control Speed of a single-phase induction motor using single phase AC voltage SPEED CONTROL OF DC SHUNT MOTOR USING SCR DUAL CONVERTER SINGLE PHASE CYCLO CONVERTER SINGLE PHASE CYCLO CONVERTER SINGLE PHASE CYCLO CONTROL TRAINER
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SCR VI CHARACTERISTICS STUDY TRAINER R. RC & UJT FIRING MODULE Consists of three types of basic firing circuit to trigger SCR. Study and test AC voltage regulators using triac, anti parallel thyristors and triac & diac. DC Chopper Trainer DC Chopper Trainer Control Speed of a single-phase induction motor using single phase AC voltage centiator Speed CONTROL OF DC SHUNT MOTOR Shopping SPEED CONTROL OF DC SHUNT MOTOR HIGH VOLTAGE) DC CONVERTER CONVERTER CONTROLE PHASE CYCLO CONVERTER (HIGH VOLTAGE). Detail mentioned in Annewers 7
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Study and test AC voltage regulators using triac, anti parallel triac, anti parallel thyristors and triac & diac. Detail mentioned in Annexure.7 DC Chopper Trainer Control Speed of a single-phase induction motor using single phase AC voltage regulator. Detail mentioned in Annexure.7 Control Speed of a single-phase induction motor using single phase AC voltage regulator. Detail mentioned in Annexure.7 Control Speed of a single-phase induction motor using single phase AC voltage regulator. Detail mentioned in Annexure.7 Shopping SPEED CONTROL OF DC SHUNT MOTOR This ser-up designed for forward and reverse speed control of DC shunt motor using SCR dual converter, Detail converter phase CYCLO CONVERTER SINGLE PHASE CYCLO CONVERTER SINGLE PHASE CYCLO CONVERTER SINGLE PHASE CYCLO CONVERTER (HIGH VOLTAGE). DCMOTORSPEED CONTROL TRAINER Ramp and Pedesial Triagger circuit, Detail mentioned in
DC Chopper Trainer Control Speed of a single-phase induction motor using single phase AC voltage regulator. Control Speed of a single-phase induction motor using single phase AC voltage regulator. Control Speed of a single-phase induction motor using single phase AC voltage regulator. Control Speed of a single-phase induction motor using single phase AC voltage regulator. Control Speed of a single-phase induction motor using single phase AC voltage regulator. Control Speed of a single-phase induction motor using single phase AC voltage regulator. This ser-up designed for forward and reverse speed control of DC shunt motor using SCR dual converter. CONVERTER SINGLE PHASE CYCLO CONVERTER (HIGH VOLTAGE). Parall mentioned in Annewtre 7 DCMOTORSPEED CONTROL TRAINER Ramp and Pedesial Trigger circuit, Detail mentioned in
Control Speed of a single-phase induction motor using single phase AC voltage regulator. One Month Shopping SPEED CONTROL OF DC SHUNT MOTOR This ser-up designed for forward and reverse speed control of USINGS ET DUAL CONVERTER SINGLE PHASE CYCLO CONVERTER CHICH VOLTAGE). DCMOTORSPEED CONTROL TRAINER Ramp and Pedesial Trigger circuit, Detail mentioned in
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SINGLE PHASE CYCLO CONVERTER SINGLE PHASE CYCLO CONVERTER (HIGH VOLTAGE). CHIGH VOLTAGE) Densil mentioned in Annexure 7 DCMOTORSPEED CONTROL TRAINER Ramp and Pedesial Trigger circuit, Detail mentioned in
DOMOTORSPEED CONTROL TRAINER Ramp and Pedestal Trigger circuit, Detail mentioned in
America 7

of which		0.6	2	FPAA Board (Field Programmable Analogic Design Board) As Derail mentioned in Annexure, 14	FPAA Board (Field Programmable Analogic Design Board)		M	17	80)	4	60,00	1	Lab	
प्राचित्र महिना अभि, महर्गियान्त्र For Upgraphia phexisting	,	0.15	22	Analog Development Boards are specially designed to provide student and engineers the platform for creating analog systems, As Detail mentioned in Annexure: 14	Analog Development Board	G.	One Month	Z	C. A. O.	Sol Gov	de Fourier No. No. One Month S	S.	GWECAECEE	17
		1.5	1	Upro 6 GHZ	RF Power meter			oller	TO THE	250	\rangle \(\)	o		
For Upgradation of existing lab	1,9	0.02	5	1 meter with attenuation 1 dB/m	RF cables	Shopping	One Month	\$ 100 miles) N	Equipment	Goods	GWEC-VECE/Microwav e Lab	8
		0.15	Ŋ	Connectors Set (SMA/BNC) As Mentioned in Annexure. 13	Connectors Set (SMA/BNC)		300	5	3				9	
		0.5	_	Display Type: LED Screen Size: 19 Inch (48cm), Detail mentioned in Annexure. 12	To study the specifications and working of LED TV		J.	×.						
		0.5	-	Colour TFT LCD : 5.7" TFT LCD (64k, Color LCD). Detail mentioned in Annexure. 12	To study the specifications and working of LCD TV									
For Upgradation of existing lab	186	0.16	ъ	Signal System: PAL/ NTSC Playable Discs formats: DVD-VIDEO; DVD+/-IVRW; , Detail mentioned in Annexure: 12	To study the specifications and working of a DVD Player	Shopping	One Month	N _o	N	Ÿ.	Equipment	Goods	GWECA/ECE/Worksho	15
		0,07	2	Input: 80x0230VAC ±10%, 50 / 60H± Output: 12V DC regulated -12V DC regulated SV DC regulated Total mentioned in Anneousta 12	To design and test SMPS using Ics									
		0,4	1	To Study the specifications and working of a public address system. Detail mentioned in Annexure. 12	To Study the specifications and working of a public address system									
For Upgradation of existing lab	6	Single Package	Single Package	Various types of Electronics Components such as Transissor, UTT, FET, Diode, Electrolyte capacitor Ceramic Capacitor, as mentioned in Annexure, 11	Raw Material for Lab of ECE Deptt.	Shopping	One Month	₹	No	N _o	Equipment	Goods	GWECA/ECE/Raw Material ECE Depti	Ŧ
For Upgradation of existing	v	2.5	u	© OS/Platform :- RedHat Enterprise Linux Workstation/Server 6.2 Ver or latest (64 bit){Licensed/Registered} © RAM :- 32 GB (DDR4) □ Hard disk :- 2 TB □ Processor :- Intel® Xeon® Processor E3-1225 v5 Annexure	Server	shoping	One Month	Z,	No	<u>v</u>	Equipment	Goods	Gweca/ECE/Server(\`LSI Labs)	3
lab	15	15	1	IC NANOMETER DESIGN, VERIFICATION AND PCB DESIGN EDA TOOL, Detail as per Annexure, 10, (25 Licence)	ETER DESIGN, VERIFICATION DESIGN EDA TOOL	Shopping	One Month	Z	No.	N ₀	LRs	Goods	Physical Design Lab	ti I
For Ungradation of existing	20	20	1	Advance (3D) TCAD Tools, Detail as per Annexure 10 (5 Licence)	Advance (3D) TCAD Tools								TOP OF CENTER	
For Upgradation of existing	3	3	1	Mask Cutting Equipment	Mask Cutting Equipment	Shopping	One Month	N ₀	No	No.	Equipment	Goods	GWECA/ECE/Mask	=
For Upgradation of existing lab	25	25	1	RF cables for microwave components upro SO GHz, Adaptors and connectors for measurement of designed devices, components and antenna structures e.g. SMA Male-Female, SMA Female-Female, SMA Female to Male, BNC to SMA, matching load box, and other connectors, Detail mentioned in Annexure. 9	RF Measurement Solutions	Shopping	One Month	Z	N	N _o	Equipment	\$ Coods	ĠWECA/ECE/RF Measurement Solutions	10
For Upgradation of existing lab	7	7	ь	FR-4, kappa 438 laminates material. RO 3003 laminates, RO 4003 Laminates materials, . Detail mentioned in Annexure.	RF Fabrication Materials	Shopping	One Month	N _o	No	Z	Equipment	Goods	GWECA/ECE/ RF Fabrication Lab	9
For Upgradation of existing	11	11	1	A 3D EM simulation software for design and optimization of high frequency components/devices/antennas /coupler/planar/multi-layered structures/SI/EMC etc. on the following solution techniques: FMM/FEM/PO/GO/UTD for multi-core processors, Detail mentioned in Annexure, 8 (3 Users)	Design, Simulation, Demonstration and Modeling of computational solutions such as antennas, high frequency components and devices using appropriate design software (RP Simulation)	Shopping	One Month	N	No	No	ធ	Goods	GWECA/ECE/ RF Simulation Lab	00
		0,125	1	2 HP DC MOTOR. Detail mentioned in Annexure,7	I HP DC MOTOR									
		0.129	1	SINGLE PHASE INDUCTIVE LOAD, Detail mentioned in Annexure 7	SINGLE PHASE INDUCTIVE LOAD			OF						
		0.14	-	SINGLE PHASE LOA RHEOSTAT, Detail mentioned in Annexure 7	SINGLE PHASE LOADING RHEOSTAT									

								1			- 1		_
		GW/F 28 Lab (Ener	27 GWECA: Grid Lab	26 GWI	25 GWI Syste	24 GWEC	GWB GwB	22 GWI	GWI 21 Servi	GWECA 20 Services MSDNA	19 Servi	GWI 18 Serve	
R.		GWFCA/EEE/Research Lab (Nonconventional Energy lab)	GWECA/EEE/Smart Grid Lab	GWECA/EEE/Power	GWEC.A/EEE/Power System Lab	GWECA/EEE/Research	GWECA/EEE/Research Lab-I	GWECA/EEE/Drives	GWECAICC & IT Servies/Internet Bandwidth	GWECA/CC & IT Servics′ NSDNAA/Dream Spark	GWECA/CC & IT Services/Network	GWECA/CC & IT Services/Firewall Gateway	
1)	/	Goods	Goods	Goods	Goods	Goods	Goods	Goods	Goods	Goods	Goods	Goods	
Town of		ods Equipment No No Inch. SI	Equipment	Equipment	Equipment	Equipment	Equipment	Equipment	LRs	LR(Software)	Equipment	Equipment	
Marille Co.	Chock	No.	No	No	No	No	No	Νο	NO	Yes	No	Ş	
(2)	(CO)	e Marie	8	No	N _o	N ₀	N,	No	NO	NO	8	No	
No.	100	CS EM	₹.	N ₆	No	No	No	No	NO	NO	N _o	No	
RO		On Wonth	One Month	One Month	One Month	One Month	One Month	One Month	1 Month	1 Month	One Month	One Month	
		Shopping	Shopping	Shopping	Shopping	Shopping	Shopping	Shopping	Shopping	Direct Contract	Shopping	Shopping	
IR Sensor	LDR Module	Solar Photo Voltaic (Generation and Measurement), Solar Thermal Water Heating System Concepts, Solar Thermal High Temperature Heating System Concepts, Wind Energy System Concepts, Wind Turbine Emulation	Smart Class Energy Efficiency Monitoring System	IGBT, GTO, Bread Bord, TRIAC, DIAC, Power BJT, Power MOSFET, Gate Driver. Sansors, LEDs, Diode, SCRs Etc.	OpraL_RT	MSO multi signal, Power Quality Apalyse,	TSM-Processor, armocotex	DSPACE Processor Board ACE box	Internet Bandwidth	MSDNAA/Dream Spark	Network Controller	Firewall/Gateway	Digital Storage Oscilloscope
Object Streetion Sensor Object Streetion Sensor Output Type Digital – Logic High or Low. Nower indicator and Output Indicator LEDs. Sensitivity can be adjusted using the on board	1. Operating voltage 3.3V-5V 2. Light Detecting Sensor	Solar Photo Voltaic (Generation and Measurement), Solar Thermal Water Heating System Concepts, Solar Thermal High Temperature Heating System Concepts, Wind Energy System Concepts, Wind Turbine Emulation, As details mentioned in Annexure- 20	An automatic System for controlling all the electrical and electronic appliences, that use in class room, smarr measuring and matering. Equipment Required For this project: PLC - ETHERNET Programmable Fieldbus Controller: Multitasking: MODBUS. SMPS; EFSTTRON®; ECO Power: 1-phase: 24 VDC; 2.5 A. RS-232/485 Serial Interface (Modbus Master), 4-channel digital output: 24 V AC/DC; 0.5 A. End Module, I/O-PRO (CoDeSys 2.9) Software Package, Energy meeters including CT PT. Temperature Sensor, PIR Sensor, LUX Sensor, Wireless Router, Enclosure, Contactor, Relay, Power Module Solar/Electric, Solar Panel 100 watt, Automatic Change Over, Wire.	IGBT, GTO, Bread Bord, TRIAC, DIAC, Power BJT, Power MOSFET, Gate Drivet, Sansors, LEDs, Diode, SCRs Etc. Mentioned in Annexure-19	OPAL-RT offers the industry's most complete, open and highest-performance real-time digital simulation solution for power systems. Mentioned in Annexure-19	MSO multi signal, Power Quality Analyse, Detail Mentioned in Anneque-19	32bit processor with core, cache, DMA, HDLC (Bir bus), 2 32bit timers, 2 ser, Interfaces with Rx and Tx FIPOs, PC and Ethernet controller10/100Mbit. The processor is developed to address digital signal control markets that demand an efficient, easy-to-use blend of control and signal processing capabilities. Mentioned in Annexure-19	The ACE Kits are real time development system with easy to use real time hardware. Mentioned in Annexure-19	Internet Connection Updation (INTERNET BANDWITH)	Package of Microshoft Software items (ANNEX, 18)	Cisco Network Controller (CISCO WLAN 2500 SERIES CONTROLLER)	er H	To obtain the wavelo Digital Storage Oscilloscope As Detail mentioned in Annexure, 14
28	20		IM	((eet.)	(size)	-	ω	1	***	***	143	H	_
320	230.4	15	ω	2	20	12	0.665666667	12	o		1	10	0.5
	II.	25	Ų	2	20	12	ы	12	00	4	_	10	
ा जिल्ला अस्ति भरतिसानस			research works for M. Tech as well as B.Tech Students	Very useful for project and					For the upgradation of Internet Bandwidht	Required Operating systems as well as tools for Academic purpose	For the WI-fi Connectivity	for the security of Network System	



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13440	10	1. Intel Atom system-on-a-chip (SoC) based on leading-edge 22 nm Silver Mont microarchitecture including a dual-core CPU and single core microcontroller (MCU) 2. Integrated Wi-Fi, Bluetooth LE, memory, and storage 3. Support for more than 30 industry-standard I/O interfaces via a 70-pin connector 4. Support for Yocto Linux, Arduino, Python, and Node is 5. Integrates with cloud platforms providing visualization of greenmed analytics and analytics.	Intel Edition Arduino Breakout Poard
704	20	1. Microcontroller ATmegs328 2. Programmable Microcontroller Board 3. Operating Voltage: 5V 4. Input Voltage: (Recommended): 7-12V 5. Digital I or O Pins 14 (of which 6 provide PWM output) 6. Flash memory 32 KB (ATmegs328) of which 0 5 KB used by bootloader \$RAM 2 KB (ATmegs328)	Arduino UNO Board
256	20	1. Photo detector and preamplifier in one package. 2. Internal filter for PCM frequency. 3. Improved shielding against electrical field disrutbance. 4. TTL and CMOS compatibility. 5. Output active low. 6. Low power consumption	ISOP 1738 Sensor Module (IR TX/RX)
704	20	Distance measurements from 2 cm to 450 cm Distance measurement Sensor Sensor has two main parts, a transducer that creates an ultrasonic sound and another listens to it's echo Working Voltage: DC 5V Cytiescent Current: 2mA Level Output: 5V high 0V low	Ultrasonic Sensor Module HCSR-04
307.2	20	1. Working Voltage Range: DC 3.6V- 18V 2. Motion Detection Sensor 3. Current drain:<60nA 4. Voltage Cutput: High/Low level signal:3.3V TTL 5. Detection distance: 3-7M(can be adjusted) 6. Delay time: 5-2008 (can be adjusted, default 5s +-3%) 7. Blockade time: 2.5 S (default)	PIR Sensor
352	8	1. Power supply: 3.3-5.5V DC 2. Output signal: 1-wire bus digital signal 3. Sensing element: Polymer humidity resistor 4. Measuring range: humidity 20-90%RH; temperature 0°50Cclsius 5. Accuracy: hu	DHT-11 Sensor (Humidity Sensor)
3.20	8	1. This sensor monite.	MQ-2 Gas Sensor

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\$120	v	1. Voltage: 4.5-5.5V 2. Current: <a0ma +="" 3.="" 4.="" 5v="" connector="" digital="" interface="" interface:="" lavel="" microphone="" mono-channel="" pin="" property="" samm="" td="" ttl="" uart="" ="" <=""><td>Voice Recognition</td></a0ma>	Voice Recognition
640	20	RF Transmitter Features 1. Frequency Range: 433.92/315MHZ. 2. Supply Voltage: 3°12V 3. Output Power: 4°16dBm 4. Circuit Shape: Saw 4. Circuit Shape: Saw RF Receiver Features 1. Receiver Frequency: 433.92/315 MHZ 2. Typical sensitivity: ~105dBm 3. Supply Current: 3 5mA 4. Frequency: 1MHz 5. Low power consumption	RF Module TX & RX 315 MHz ASK
576	10	1. USB RFID Reader with USB, RS232 and TTL outputs 2. 125kHz Operating Range - Supports all types of tag cards, keyfobs and other RFID tags in 125kHz range 3. Can be powered via USB or power adapter (7V-20V) - 7805 Regulator on Board for adapter input 4. Buzzer indication for tag detection - LED indications present on board as well.	RFID Tag & Reader
358,4	20	1. Seria/UART band rate: 115200 bps 2. Input power: 3.3V 3. I/O voltage tolerance: 3.6V 4. Max Flash Memory Size: 1MB (3Mbit) 5. UAS Tash Memory Size: 1MB (3Mbit)	ESP8266-01
1024	20	1. The sensor converts any magnetic field to a differential voltage output on 3 axes 2. Power 3V-5V DC 3. Chipset HMC58831. 4. Communication via 12C protocol 5. Measuring range: ± 1 6. 3-8 Gauss	HMCS883L,Triple Axis Magnetometer
640	20		Triple Axis Accelerometer+ Gyroscope- MPU6050
3456	10	ule 728'488 Raspberry Pi VZ Official 8 Megapixel HD Camera Board Wish IMX219 PO CMOS Image Sensor	CMOS IR Camera Module 728'488
4480	13	1. Product Dimensio: x 5.4 x 1.7 cm 2. Programmable based microprocessor system (Mini computer) 3. OS. Linux, window 10 IoT 4. Processor Strand Broadcom BCM2387 chipset 5. Processor Speed 1.2 GHz Processor Count 4 6. RAM Size 1 GB 7. Graphics Coprocessor Broadcom Graphics Chipset Brand 8. Broadcom Graphics	Raspberry P1-3

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(Gove Market Trans College Ajmer



																				29 Sensor Lab Goods Eqipments No NO	
			_																	NO One Month Shopping	
4 Wheel Robot Car Chassis Kit DIY Robotic kits	Arduino Case	HDMI to VGI Cable	SD card Class 10	soldering kit		COD CAPITA A COLO	I FOR COMO A TO B			Вашегу Сар	9 Volt Battery	resistor wi	Single Stand Wire	16°2 LCD Display	Bread Board 400 pin	General Purpose solderable Board	Bread Board 800 pin	L2938 Mator Driver	Servo Motor Motor	DC Mator	
Metallic Chassis Autonomous and Maze solver Robotics DIY KITS	Suidable for Arduino UNO	HILL HOSINGSAT	Saftlisk Class 10, Memory Siza, 16GB	Soldering 1RON + Passer + Soldering wire & desoldering wool	 Supports Plug and Play specification, Made with High- Quality materials to guarantee reliable, error free data transmissions 	4. Supports up to 127 devices on a Daisy-Chain configuration	USB 1.1 specification) 3. Evilly compatible with PC and Macintosh	2. Data transfer up to 480 Mbits /sec (40X increase from the	 Fully compliant with USB 2.0 Specification Revision 2.0 and 1.1 	TO THE OWNER CONTRACTOR OF THE OWNER CONTRACTOR OWNER CONTRACTO	2. Size: 6F22 006P 3. Jacket: Metal 4. Nominal Voltage (V): 9V 5. Discharge Resistance (Ω): 620	1. Battery Type: Zinc Carbon	M-M, M-F, F-F	I. LCD display module with Yellow Backlight 2. SIZE: 20x4 (2 Rows and 16 Characters Per Row) 3. Built-in industry standard HD44780 equivalent LCD controller	Solder less breadboards are great for rapid prototyping 400 Total Tie Points Terminal Strip (300 Tie Points) 4 2 Distribution Strips (100 Tie Points) Adhesive backing	I. Material: FR2 PREMIUM QUALITY Copper Clad Phenolic 2. Holes provided: Yes Size: 140mm x 90mm 3. Copper Layer: Lacquered (to prevent corrosion) 4. Package Content: 3 x Universal PCB Boards (General	800 Total Tie Points	1. Compatible with arduno, raspectry pt, arm, avt, ptc, 805., etc can provide bidirectional drive currents of up to 800-ma at voltages from 4 2. With terminal blocks for connecting motors and power supply and berg sticks for control signals from microcontroller 3. Can control 2 dc motors, their direction using control lines	1 3.3-5V 2 Torque: 1.8 kgcm 3 Weight: 9 gram 4 Cana Torgan District	1. 1000 RPM 2. 12V 3. Torme 3 kp-cm	5. Holding torque - 11 Kgcm
20	20	5 5	15	5		ŧ	3			20	20		л o	20	10	20	20	20	10	20	
1280 3200	256	512	1088	\$40			128			19.2	2		517	320	147.2	128	160	320	256	256	

256 256 256 1280 3200

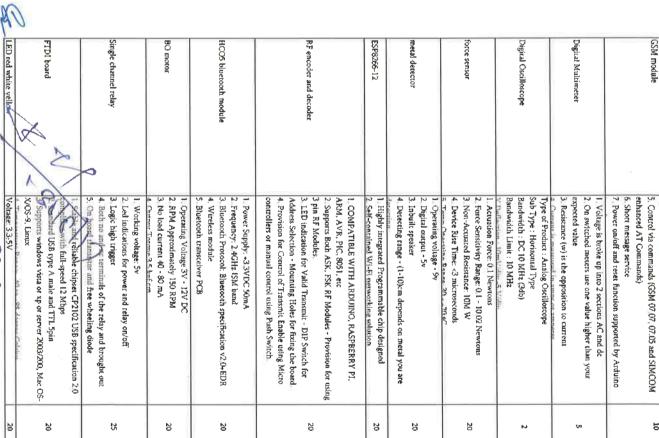
Project Lab Purpose and Faculty Research Annexure 21

8.768





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320

88

768

512

256

Zig bee module (TX & RX)

4. Class 1 (1W@1800/1900MHz)

10

8

12800

8

1280

Class 4 (2W@850/900MHz)

Compliant to GSM phase 2/2+

4. ADC Channels: (4):10-bit: ADC L. Quad-Band 850/900/1800/1900

2. Frequency (ISM Band): 2.4GHz

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3840

. RF Standard: 802.1

Digital I/O: 15



448

320

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				GWECA-Mechanical/Pr																								
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1	Core Hardness Tester	Green Mould Hardness Tester	Universal Sand Strength Machine, Accessories for Universal Sand Strength Machine	Rapid Sand Washer (Similar To Ridsəle Type)	Rapid Moisture Meter	FOUNDARY \$HOP: Crucible with Handle	FOUNDARY SHOP: Making aMould	Thermocouple	Milling Tool Dynamometer 2 Component	Drilling Tool Dynamometer	Lathe Tool Dynamometer (Three Component type)	Profile Projector	Vernier Tooth Gauge		Sine Bar	Slip Gauges Set	Universal Bevel protractor	Telescopic Gauge	Digital Vernier Caliper	Mechanical Vermer Cauper	Micrometer Inside Type	Micrometer Outside Type	icrometer Outside Type	Dial Gauge	Installation Charges and training	consumables	wire Coner	buzzer
	For ontrolling to	Promesting the state of the sta			To perform Mois			Measurement of turning using the		Forque and thruin annexue 22		To check accuracy projector, Projecti	Measurement of gear tooth the Vernier caliner, 1-20 module	300mm, Measure	250mm, Measure	To measure a gay (Complete set). To bore measuremen access the metho	Measurement of a protector Size 12"	Telescoping T Bore Gau Professional Set w/Case	Range 300mm	LC 0.02 mm Range - 300mm	LC. 0.01 mm Range 50-200 mm	L.C. 0.01 mm 25	LC 0.01 mm 0-25 mm	Study of various Vernier caliper a	installation of open source software equipments and related Training	connectors, exter	Used extensively for strippi Made from high grade steel	1. Rated Voltage: DC 2. Small and Light High Po frequency High efficiency
Chairman	For ontrolling the surface hardness of cores produced by traditional and newest core processes.	meaning the surface hardness of green sand moulds and success Complete with case. Range 0 to 100.	Strength test (compressive, Tensile, sheat Transverse etc. in green and dry conditions) and Hardness test (Mould and core), (a)One pair compression test accessories (b) One pair rensile attength accessories (c) One pair shearing test accessories (d) One pair Transverse strength accessories for detial see in annotate V2	For determining mud content from the grain of Moulding Sand, complete with motor 4000 R.P.M.220 AC.DC, with cable, thus and sinhon.	To perform Moisture test and clay content test.	Crucible with Handle to be use in Smithy shop	To prepare mould of a given pattern requiring core and to east it in aluminum.	Measurement of thip tool interference temperature during turning using thermocouple technique.	Forces measurement during plain milling operation, Range of force measurement in coordinate direction 0-500 kg. for derial see in annessee 22.	Forque and chrust measurement during drilling, for detial see in annexue 22.	Forces measurements during orthogonal turning. Range: 0 to 200 Kg, least count- 1 kg, for detial see in annexue 22	To check accuracy of gear profile with the help of profile projector, Projection Screen Diameter: 200 mm, for detial tee in anneous 22	Measurement of gear tooth thickness by using gear tooth Vernier caliner, 1-20 module	XOmm, Measurement of angle by using sine bar	200mm, Measurement of angle by using sine bar 250mm, Measurement of angle by using sine bar	To measure a gap by using Slip Gauges Of 83 pieces (Complete set). To compare & access the method of small bore measurement with the aid of spheres To compare & access the method of small bore measurement with the aid of spheres.	Measurement of angle and width of V groove by using bevel protector Size 12"	Telescoping T Bore Gauge 6 pc Cylinder Hole Smooth Gage Professional Set sw/Case		nge - 300mm	nge 50-200 mm	-50 mm	25 mm	Study of various measuring tools like dial gauge, micrometer. Vernier caliper and telescopic gauges, 0-25mm L C 0.01mm	installation of open source softwares compatible to equipments and related Training.	connectors, extention board & cables etc.	Used extensively for stripping electrical wires Made from high grade steel	Rated Voltage: DC Small and Light High Power-Dissipation Capability Low frequency High efficiency Din Purch: 7 mm 4.0 37 inch
	_	_		_	_		10	1	-	_		_	_			f 1	1	-	-	- -	-	_	-	ь	1	_	25	20
	13800	13800	129120	19920	6120	3000	6480	15000	49800	41400	45000	103200	6480	8520	5040	15360	27720	2640	9000	18120	22560	5760	4560	1800	64000	64000	320	19.2
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STATE OF THE PARTY	The second	A STATE OF THE PARTY OF THE PAR	items mentioned in Annexure 22	New Lab setup for M.E.Department, detail of																				R	×			

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	Cam and Follower	Elliptical Trammel	Scorch Yoke Mechanism	Oldham Coupling	Crank and Slotted Lever Mechanism Apparatus	Model of Crank & Slotted Lever Mechanism	Inversion of Four Bar Mechanism	TIG Welding sec	MIG Welding set	Spot Welding Set	Oven	Sand Rammer (Ridsdale Type)	Sand Muller	Sieve Shaker (Gyratory type)	Sand Permeability Meter
//	7		2		r Mechanism	ed Lever Mechanism	lechanism					Туре)		(vpe)	ц.
	Study of various Cam & Follower arrangements. Set consists of five different types, mounted individually on separate boards. Tagee cm. With reciprocating flat faced follower. With oscillating roller follower. (c) Undirical cam: With translating follower. (d) Tablating cam with reciprocating knife edge follower. (e) End cam with translating flower.	One of sixteen mechanisms built on an A3 board equally. The principal components are made from amber coloured. Perspex, pivoted with bollow rivers, and mounted on a board.	Metallic model mounted on the wooden board	Study of inversion of double slider chain Oldham Coupling, Scotch Yoke Mechanism and Elliptical Trammel, Metallic section cut model explains the transmission between two shafts which are not co-exial. The model is mounted on a transdate here.	Metallic model mounted on the board provided with a praduated scale	Study of quick return Mechanism and draw velocity and acceleration diagram, Metallic model mounted on the wooden hoard	To study inversion of four bar chain: Coupling rod, Beam engine. To study Steering Mechanism, Davis and Ackerman NOTE: On following models Coupling Rod, Beam Engine & Ackerman Steering Mechanism are provided. Model is made up of aluminum and other metallic parts. (i) Locomotive Coupling Bar Mechanism, or link mechanism, (ii) Beam Engine Mechanism and (iii) Ackerman steering gear mechanism. Detail mentioned in Annexure 23.	TIG Welding set with a cylinder. Complete with all accessories	MIG Welding set with a cylinder. Complete with all accessories	Hands on practice on spot Welding, Spot Welding Set, 75kVA	Size 14"x14", G.I. inside	For preparing A.F.S. standard test specimens. It is used to ram the sand specimen for A.F.S. green and dry permeability test of mould and core sand, compression test, sharing strength test, tensile strength test, and transverse strength test and transverse strength test. Complete with sample tube pedestal cup and stripping post. Accessories for the above rammer: (a) one Tensile Ramming Block (b)one Transverse Ramming Block (c) one Split specimen tube for detial see in annexue 22	Batch Capacity: 5 Kg. Electric motor of I/2 H.P. working on AC supply	A FS Sieve Analysis Test with following Accessories: A Set of following Sieves of 20 cm dia brass frame: 1.7 mm, 850, 600, 425, 300, 212, 150, 106, 75 and 53 Microns with Lid and Pan Digital Weighing balance 200 gm capacity, L.C. 0.01 g Annexure 22	To perform permeabl st. Complete with 2 Nos. orifices large & small and Permeability scale, for detial see in annexue 22
	nns.Set consists on separate as faced g roller follower, eer, (d) ge follower, (e)	oard equally, ber coloured unted on a board	ď.	ham Coupling, mel, Metallic between two nounted on a	led with a	velocity and ed on the	g rod, Beam s and Ackerman. Beam Engine ed Model is ts. (i) k mechanism, man sceering ure 23	with all	with all	elding Sec.		It is used to dry permeability L. sharing Less strength Aith sample tube, for the above	H.P. working on	cessories: rame: rand 53 Microns	2 Nos. orifices al see in
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	13920	2160	2640	3720	10080	3360	8160	114000	126000	61800	9360	62760	61800	4 6440	57720
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-	P																							onth Shopping			
	Model of Corner Soily	Model of Lancashire Boiler	Epicyclic Gear Box (Sun and Manet type)	Sectionised 4/5 Speed Gear Box	Moment of Inertia of Flywheel	Moment of Inertia of Flywheel	Static and Dynamic Balance Machine	Covernor Apparatus Journal Bearing Apparatus	DYNAMICS OF MACHINE (DOM) LAB	Single place clutch Crank and Slotted Lever Mechanism	Multi Plate Clutch	Cone Clutch	Claw Clurch	Centrifugal Clutch	Air Brake Actual Working	Power Brake Actual Working	Mechanical Brake	Hydraulic Brake unit (Four Brake Drum) Hydraulic Brake unit (Four Brake Drum)	Disc Brake Actual Working	Internal Expanding Shoe Brake	Hydraulic Brake	Band and Block Brake	Band Brake	Brake:Single Shoe Brake or Block Brake Brake:Double Shoe Brake	DYNAMOMETER: Rope Brake Dynamometet	DYNAMOMETER: Prony Brake Dynamometer	Cam Analysis Apparaus
Chairman	In appearance this boiler model is similar to Lancashire boiler with the difference that one fire tube passes from end to end	Steet shell is about 75cm long and 22cm in diameter. Two targe tubes known as fire tubes pass from end to end. Details mentioned in Annecessite 24	Study of a planetary gear box. A metallic model consists of a sun gear, arm and a planetary gear inside a casing. Annexure	Study of a Sliding Mesh Gear Box. Sectionised 4/5 Speed Gear Box with gear operating lever. Model is mounted on a stand	Wheel 25 cm dia	To determine mass moment of inertia of a flywheel, Apparatus consists of a balanced C.I. wheel and the steel spindle is supported on ball bearings in strong iron brackets. Wheel 20 cm dia, Detail mentioned in Annexure 23.	To perform static and dynamic balancing on balancing set up.	To plot pressure distribution curves on a fournal bearing.	To verify the torque relation for gyroscope Consists	An all metallic model, mounted on base with operating lever Position, Velocity and acceleration analysis of Slider Crank	An all metallic model mounted on metallic base with handle drive arrangement.	Model is having sliding groove. An all metallic model mounted on base with onerating lever.	Model is having a sliding groove. An all metallic model, mounted on base with onerating lever.	Model consists of a drum pulley mounted on the output shaft. The input shaft carrying spring controlled fly weights. The working can be demonstrated by rozating the input shaft provided with crank handle. The output shaft rozates with clurch action.	Air Brake Actual Working	Power Brake Actual Working	Sectionised model consists of operating lever & brake pedal firred on a vertical and heavy base.	Same as 45 but with four brake drams and a master cylinder		Model consists of a hollow drum and two shoes pivoted on	Model a sectionised unit consists of a master cylinder	Model consists of a brake drum mounted on a shaft, free to	Model consists of a brake drum mounted on a shaft, free to rotate in bearings. A flexible band is wrapped partly around the drum. Brake force can be applied with the help of a lever. Model is mounted on a base.	Model consists of a brake drum, mounted on a shaft free to Model consists of a brake drum, provided with two levers	Model consists of a cast iron machined wheel of 45 cm dia with a groove. The steel axle is mounted on ball bearings to minimize ffiction and assembled on a sturdy frame. Provided with an extension balance, rope and a set of weights and harmone.	Study of various types of dynamometers, Brakes and Clutches, Model consists of two wooden blocks clamped tropether with a milley in the centre	To plot displacement agle of rotation curve for various cams. Consisting of (A) Different types of cams. (i) Tangent Cam., (ii) Arc Cam., (iii) Eccentric Cam., (B) Different Types of followers. (i) Kinfe Edged follower, (ii) Roller Follower, (iii) Flat Faced Follower
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	13800	13800	5640	15000	6840	3120	22200	69000	36600	10200	3840	3720	3600	3840	36600	35040	6840	19920	18840	3840	7320	3840	3840	3840	11520	6360	16680
4	The state of the s	Dellan												ı									ţ	4 65 frems mentioned in .	New Lab serup for		

n, detail of d in Annexure

Model of Babcock and Wilcox Boiler	It is a water tube both the shell is 15 cm in diameter and 75cm in length and is fitted with a super heaver and with inclined water tubes over the furnace connected with headers. Details mentiond in Anneeexure 24.	A
Model of Locomotive Boiler	The model is specially designed to understand the working of a locomotive steam boiler. The steel shell is of about 20 cm dia and 60cm in length. The fire box is provided with a door and gate. Details mentiond in Annecessure 24.	4
Model of Cochran Boiler	This is the best known vertical type fire tube boiler. The shell is about 25cm in diameter and 60cm high. The cylindrical fire box is with a door and gate at its bottom.	н
Vertical Water Tube Boiler	It is fitted inside a cylindrical fire box to increase the heating surface and improve the circulation of the water. The fire box is fitted with cross tubes. Details mentiond in	#4
Loeffler Boiler	It is a properly constructed model made of wooden and metallic parts showing necessary parts such as economiser, press convection, super heater, steam outlet, radiant super heater. Details mentiond in Annecessure 24.	1
Lamont Boiler	It is a properly constructed non working model made of wooden and metallic parts showing necessary parts such as boiler. feed pump, check valve, economiser, Details mentiond in Annecessure 24.	ē
Benson Boiler Model	It is a properly constructed non working model made of wooden and metallic parts showing necessary parts such as economiser. Details mentiond in Annecessure 24.	1
Velox Boiler Model	It is a properly constructed non working model made of wooden and metallic parts showing necessary parts such as air compressor, feed pump, and Details mentiond in Annergouster 24.	-
Sterling Boiler Model	It is a properly constructed non working model made of wooden and metallic parts showing necessary parts such as two upper drums, mud drum, water tubes, baffle wall super heater, steam pipe and stop valve etc. Overall size is about 50 cm x 20 cm x 75 cm. Details mentiond in Annecessure 24	ь
Lever Safery Valve	An all metallic demonstration model shows the valve seat, falcrum and lever with adjustable weight.	_
Spring Loaded Safety Valve	The demonstration model is having two separate valves with one lever hearing loaded by a spring	-
Dead Weight Safety Valve	The valve is resting on the seat at the top of an outlet pipe. The valve and pipe are covered by a case carrying weights banding freely from the valve.	_
Combined High Steam and Low Water Safety Valve	Safety valve blows off when the steam pressure exceeds the working pressure. Details mentiond in Annecessure 24.	-
Water Gauge Model	The model is an all metallic and properly constructed. Upper and lower parts are with transparent inserts to make the interior construction visible and are connected by a hollow column. Details mentioned in Annecessure 24.	-
Stop Valve Hopkinson Type	The type has many advantages over ordinary design of junction stop valve. Details mentiond in Annecessure 24.	-
Feed Check Valve	Howtman's type, all metalic section cut model. A good design of non return valve and arrangement for regulating by band can be easily demonstrated with this all metalic	-



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outlet. Details mentiond in Anneecexure 24.

system of feeding a boiler with water by direct use of steam.

Showing water and steam inlet, overflow valve and overflow This cutaway demonstration model is to understand the

			03	Ch	ı	3	1		2			=	3
2	9360	iii	Study of fuel supply system of a petrol engine (fuel pump and simple carburetor) Model consists of a petrol tank, fuel pump, filter and carburetor. Model is complete on a base of the AO - AO - m	Model of Fuel Supply System of A Perrol. Engine	m s I	N,	SE	2					
1	18840	/A	Model consists of original parts as pinton & bevel, crown wheel, differential gear, shafts and brake drums. Model is moderated on a base	Differential and Rear Axle Assembly									
	7080	-	Original, only dissected differential gear assembly mounted on a wooden base with driving handle	Differential Gear Assembly									
	57720	-		Actual Cut Section Automatic Gear Box Car (Internal Gear)	[2] A								
	18840	-		Actual Cut Section Gear Box Jeep (Sliding Mesh)	ا د ځ								
	21000	#4	Original, sectionised 4/5 speed gear box with gear operating lever and clutch. Model is mounted on a stand.	Option- Gear Box with Clutch	0								
	13800	-	Original, sectionised 4% speed gear box with gear operating lever. Model is mounted on a stand	Gear Box (Constant Mesh)	െ								
	7320	544	Study of transmission system including clutches, gear box assembly and differential. Original, Dissected Model	Clurch	С								
	36600	2		hir Brake Actual Working	<u> </u>								
	18840 35040	2 1		Disc Brake Actual Working Power Brake Actual Working	नाद								
57.7344	19920	-	Same as above but with four brake drums and a master evlinder	Option II- Hydraulic Brake unit (Four Brake Drum)	Shopping	One Month	7.	N	No.	Eqipments	Goods	GWECA Mechanical He at Transfer Lab	ts
-40	13800	-	Same as above but with two brake drums and a master evlinder	Option I - Hydraulic Brake unit (Two Brake Drum)	0.0								
	7320	-	Study of braking system with specific reference to types of braking system, master cylinder and brake shoes. Details mentioned in Annecessories 24	Model of Hydraulic Brake	Z								
	18840	1-0	Demonstration of Steering system and measurement of steering geometry angles and their impact on vehicle performance. NOTE: We are dealing in only demonstration model. Model consists of steering wheel rack & pinion, drop arm, drag link, steering arm and track road. Model is	Actual Cut Section Model of Steering System	> 1								
	5760		Flue passage and all brick work is shown in wood work and the model is made in such a manner that an inner section view can be seen easily. The overall size is about 30 x 30 x 20	Sudgen Super Heaver	တ္ ၂								
	7080	н	It is an all metallic demonstration model to understand the working of a feed water heater. Complete with safety valve, scrapers, chains and pulleys. Details mentiond in Anneaewise 34.	Green Economizer	െ								
	4320	J	This type is intended to separate water by a float which is raised when it accumulates in the trap, thus opening a valve and permitting water to escape. Details mentiond in	Float Steam Trap	<u> </u>								
	3480	-	In this system the advantage is taken of the expansion of materials on heating. The unit is all metallic, section cut, mounted on 40 cm high wooden board	Expansion Steam Trap	gs I								
	1560	-	Model is complete with seating of junction valve. The perforated pipe is about 30 cm long and 4 cm in diameter	Anti-Priming Pipe	> 1								
	2400	-	Section cut & properly constructed models mounted on nalished wooden base	Fusible Plugs	হু								
	3000	-	The function of this valve is to maintain a constant reduced pressure on the engine side while the higher pressure on the boiler side may be variable. It is a large size section cut model	Reducing Valve	∞ 1								
	1920	-	The model is a metallic sectionised mounted on base	Blow Off Cock	pp								
	2400	-	This cutaway demon and model is to understand the system explaining the principle. Details mentiond in Annecessure 24.	Pressure Gauge	:9 T	7							

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New Lab setup for M.E.Department (Annexure 24)





1	Natural Convection Apparatus	Stefan Boltzman Apparatus	Emissivity Measurement Apparatus	Pin Fin Apparatus	Thermal Conductivity of Metal Rod	Thermal Conductivity of Insulating Powder	Model Board Consisting of Various Controls Used in Refrigeration & Air Conditioning	Mechanical Heat Pump Trainer	Vapour Compression Refrigeration Cycle Test Rig	Orsat Gas Analysis Apparatus (Without Chemicale)	Actual Cut Section Model of Water Cooled Cooling System of an Automobile	Actual Cut Section Model of Splash Lubrication System of an Automobile	Model of Electronic Ignition System of I.C. Engine	Model of Ignition System of I.C. Engine	Model of Fuel Supply System of a Diesel Engine
	Experimental set up consists of. Vertical cylinder with feater uside. Rectangular enclosure open from the top and bottom as well as one side perspex along with stand etc and (b) Control panel consists of: Digital Voltmeter, Digital Ammeter etc., Detail Mentioned in Annexure 24	(a) Experimental Set up consists of: (i) Copper semi sphere with copper vessel, Hot water tank with immersion heater etc and (b) Control panel consists of: Digital temperature indicator, Switch for Mains & Heater, etc., Detail Mentioned in Annexure 24	(a) Experimental Set up consists of: Test plate: Polished Copper, Reference plate: Black Copper etc. and Control panel consists of: Digital Voltmeter with selector switch. Digital Ammeter - 2 Nos. etc., Detall Mentioned in	(a) Experimental set up consists of: Mechanical unit with Heater on test section. Set of thermocouples and Control panel consists of: Digital Voltmeter. Digital Ammeter etc.	(a) Experimental set up consists of: Test rod of Brass, Band heater etc. and (b) Control panel consists of: Digital Voltmeter with L.C. of 0.1 V, Digital Ammeter with L.C. of 0.01 A are	(a) Experimental set up consists of: Testing material capillary, Guard heater & main heater assembly, etc. and (b) Control panel consists of: Digital voltmeter, Digital annuary are	To study various controls used in Refrigeration and Air conditioning systems.	To determine the COP and tonnage capacity of a mechanical heat pump Heat pump and refrigerating machine basically words on the same principle and with the same components. Compressor : 1/4 HP Kirloekar make, Condenser fin Air cooled, shell & coil type, Solenoid valve : Expansion Valve : Thermostatic Expansion valve, Thermostat : 5C to Details mentiond in Anneecexure 24.	To study refrigeration cycle, determination of coefficient of performance of cycle and tonnage capacity of refrigeration unit. Details mentioned in Annoesexure 24.	Analysis of engine exhaust gases using Orsat apparatus / gas analyzer, For the determination of CO2, CO and O2 particularly in fuel and furnace gases. Details mentiond in humanessure 24.		Study of Lubrication system of an IC engine (Mist, splash and pressure lubrication)	Model consists of a solenoid starter, ignition switch, ignition coil, distributor, four plugs with necessary connections and terminals for battery connections	Study of Ignition System of an IC engine (Battery and magneto ignition system) and Electronic Ignition System, Model consists of a solenoid starter, ignition switch, ignition coil, distributor, four plugs with necessary connections and terminals for battery connections, with A small Battery with	Study of fuel supply. 1 of a Diesel engine (fuel pump and fuel injector), Model consists of a diesel tank, fuel injection pump, filter and automizer. Model is complete on a base board.
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S	SHAPING MAGN	ersal Geared	eared Head I		IR Spectrophotometer	ndustrial microwave	Forced Convection Apparatus	Parallel and Counter Current Double Pipe Heat Exchanger	Critical Heat Flux Apparatus	Wise & Film ratus
4.	A A	Universal Geared Head MILLING M	All Geared Head Lathe Machine		eter	īvė	Apparatus	Parallel and Counter Current Flow in Double Pipe Heat Exchanger	Apparatus	Drop Wise & Film Wise Condensation Apparatus
	P/,	IG MACHINE	71					ow in a		nsation
	SHAPING MA Pulley Type, F Back Tray & A such as 2 H P Halt & Estimat		standard accessori Electrical such a R / F Switch V-J 8" x 3 Jaw Precis 10" x 4 Jaw Precis 10" x 4 Jaw Precis Chuck Plate: Face Plate Follow Rest Face Plate Follow Rest Seady Rest Rear Tool Post Splash Guard Quick Change T Coolant Pumin A Keyway milling Machine Lamp Detial mentioned	Medium Duty I Machine having Separate, Spindl BED Complete Length of Bed Height of Centra With of Bed; Spindle Hollow Admit Between	Spectral ra	Multi mod detail mer	(a) Exquinit with consists of ammeter 1	(a) Exper section (1) mm outer painted et temperatu Mentiones	a) Experiment for perspex to Voltmeter, I	Experime coefficient
	SHAPING MACHINE with 18" Stroke Heavy Duty Cone Pulley Type, Fitted with Vice, Motor Pulley, Handle, Ram Back Tray & Automatic Lubrication Arrangement Electric such as 2 H.P. 1440 R.P.M. 3 Phase Electric Motor Starter, Back & Startons	Universal Geared Head MILLING MACHINE Complete of Table Size: 32" x 7" with all std. acc. Having Electrical such as 1 HP 1440 RPM 3 Phase Electric Motor, RVF Switch, V-Belt & Fittings, Coolant Pump& Fittings Vertical Attachment. Dividing Head (Two side Hole PlateCentrel Homm). Rotary Table 8"Dia., Milling Vice(100mm) Detials mentioned in Annexure 25	standard accessories are as follows: Electrical such as 2 H.P. 1440 RP: R / F Switch V-Belt & Firtings 8" x 3 Jaw Precision True Chuck 10" x 4 Jaw Precision Dog Chuck Chuck Plate: Face Plate Follow Rest Steady Rest Rear Tool Post Splash Guard Quick Change Tool Post Coolant Pump Tank & Firting Taper Turning Attachment Keyway milling Machine Lamp Detial mentioned in Annexure 25	Medium Dury High Precision All Geared Head Lathe Machine having Six Feed Gear Box Lead Screw 8: Feed Separate, Spindle Speed 48:-1535RPM with HARDENED BED Complete with all standard accessories Length of Bed : 7 Length of Centre.: 175mm. Width of Bed : 242mm. Spindle Hollow: 40mm. Admit Between Centre: 1200 mm.	Spectral range 5000-50 cm-1 and resolution 0.3 cm-1 or better and detail mentioned in Annexure-31	Multi mode, continuous flow, 100 detail mentioned in Annexure-31	(a) Experimental set up consists of: Blower, Mechanical unit with heater on test section etc and (b) Control panel consists of: Digital voltmeter with a LC of TV. Digital annueter with LC of 0.01 A	(a) Experimental set up consists of: Concentric pipe test section (1m long, Innet Tube 63 mm dia (internal) and 8.0 mm outer dia fitted in a suitable MS angle structure painted etc and (b) Control panel consists of Digital temperature indicator, Switch for mains & hearer etc., Deta Mentioned in Annexure 24	 Experimental set up consists of: Perspex Trough, Stand for perspex trough and (b) Control panel consists of: Digit Voltmeter, Digital Ammeter etc., Detail mentioned in American 74 	Experimental set up ecermination of beat transfer coefficient in drop wise & film wise condensation, Detail Mentioned in Annexure 24
	with 18" Str th Vice, Mor c Lubrication P.M. 3 Phase	1 MILLING I 2: 32" x 7" wi 1440 RPM: Dividing He totary Table Annexure 2"	e as follows: JP. 1440 RP) R Fittings True Chuck Dog Chuck Dog Chuck Dog Chuck Dog Chuck Dog Chuck	ecision All Ceed Gear Box ed Gear Box d 48-1535Rf l standard ac 7 7 7 m. m. m.	oned in Anr	ıs flow, 1000 mexure-31	it up consists it section etc meter with a	ip consists of r Tube 6.3 m a suitable M: nurol panel i Switch for r	p consists of: (b) Contro meter etc [etermina e & film wist
	oke Heavy I for Pulley, H in Arrangeme Electric Mo	MACHINE th all std. ac 3 Phase Elec lant Pump& ad (Two side 8 Dia., Milli	M 3 Phase E	eared Head Lead Screw M with HA cessories	solution 0.3 sexure-31	W., 200 degr	of: Blower. and (b) Co a L C of I V	Concentri m dia (inten S angle struc consists of I consists de hear	Perspex Tro I panel consi betail mentic	etermination of heat transfer film wise condensation, Detail
	SHAPING MACHINE with 18" Stroke Heavy Duty Cone Pulley Type, Fixed with Vice, Motor Pulley, Handle, Ram Back Tray & Automatic Lubrication Arrangement Electrical such as 2 H.P. 1440 R.P.M., 3 Phase Electric Motor Starter, Visite Sections	c. Having rric Motor, Fittings Hole	standard accessories are as follows: Electrical such as 2 H.P. 1440 RPM 3 Phase Electric Motor R / P Switch V-Belt & Fittings 8" x 3 Jaw Precision True Chuck - Or x 4 Jaw Precision Dog Chuck - Chuck Plate: - Face Plate - Face Plate - Follow Rest - Steady Rest - Rear Tool Post - Splash Guard - Quick Change Tool Post - Coolant Pump Tank & Fitting - Coolant Pump Attachment - Keyway milling - Machine Lamp Detial mentioned in Annexure 25	Medium Dury High Precision All Geared Head Lathe Machine having Six Feed Gear Box Lead Screw & Feed Shaft Separate, Spindle Speed 48-1535RPM with HARDENED BED Complete with all standard accessories. Length of Bed 7 Length of Centre. 175mm. Width of Bed 242mm. Spindle Hollow: 40mm. Spindle Hollow: 20mm.	cm-1 or	Multi mode, continuous flow, 1000W, 200 degree Centigrate, detail mentioned in Annexure-31	Mechanical ntrol panel . Digital	(a) Experimental set up consists of: Concentric pipe test section (1 m long, Inner Tube 6.3 mm dis (internal) and 8.0 mm outer dis fitted in a suitable MS angle structure painted etc and (b) Control panel consists of Digital temperature indicator, Switch for mains & heater etc., Detail Mentioned in Annexure 24	Experimental set up consists of: Perspex Trough, Stand for perspex trough and (b) Control panel consists of: Digital Voltmeter, Digital Ammeter etc., Detail mentioned in American 24	transfer on, Detail
	1	1	A		Single Package	e, Single Package	P\$24	-	94	ы
	186550	243600	365790		3000000	1500000	39360	41520	37800	69600
	<u>du</u>	20.9231				1				
अंग्रेस	# 1 T		New							
計	The state of the s	M.E. Department, detail of items mentioned in Aunexure 25	New Lab setup for							
(0		n Annexure								

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असि । प्राप्त		0.3	1	J Full Serup with telescope	elescope			12	No.	0				
- WO -	日本	0.1	2	Full Kit	Charge & Discharge Charlemen Kin		M	>	1	7				
上		0.245	_	Mull setup along with lamp and spectrometer	Dispersive Power of prism		N	_	_	_				
) - !	1	0.25	_	Sull Sedip	Sexiant									
lab	1	0.5	_	by He Kall setup of He-Ne laser, stell optical Bench	the coherent length of lase	Studdone	Che Mondi		ž	200	Equipment	\$000\$	s Lub	<u>ن</u> «
New Experiments for exsiting	2983	0.225	22	Thermometer, diode, voltmeter, ammeter and full setup	semiconductor diode Band Gap		On Marit	3	<u> </u>		1		GW ECA Physics Physic	
		0.25	ь	Full setup along with lamp and spectrometer	Diffraction gracing									
		0,22	2	Polarimeter Tube, Lamp with full set up (one half shade and one biquartz)	Polarimeter set up									
		0,2	-	Sodium ligth source with housing, transformer &lamp	Newton's Ring set up									
		Rs. 150.00 Per point	65	Service Charges for Crimping, Punching, Fixing of I/Os, Racks, Patch Panel and testing	Service Charges & networking									
		Rs. 25 per meter	1830 m	Service Charges including accessories such as Casings Laying of cable, screws, pipes and related fixtures	Service Charges & accessories									
30		8450	w		Dlink 24 Port Switch with 2 Gigabit Ports, DGS1024		_						mbarca may were our news	
items mentioned in Annexure	1 68515	3250	3		Rack 6U Wall Mount	Shopping	One Month	No.	No	No.	Equipment	Goods	GWECA Mechanical Co	36
New Lab serup for		135	8	Dlink	CAT6 Patch cord 1m CAT6 Patch cord 2m									
		116	1830m		CAT 6 Cable									
		3650	w	Dlink	CAT 6 Patch Panel 24 Port									
		240	65	Dlink	CAT6 I/O + TR Box									
		٠,	1	ANSYS Academic Teaching (Mechanical + CFD) ANSYS Academic Teaching Mechanical + CFD Solution (25 Users)	ANSYS Academic (Mech+CFD)									
New Lab setup for M.E. Department.	14.55	5.55	-	Complete Solid Works software perpetual license including with one year subscription. 60 copy of complete Solid Works software perpetual license (latest version) including with one year subscription/upgradation including. Annexure 27. (60 Users)	Software Solidworks	Direct	One Month	N _o	Z	yes	LRs	Goods	GWECA:Mechanical/C AM, CAM & CAE Lab	33
		39000	1	Electrical 220V AC with magnetic pickup for measurement of displacement 0-5 mm, Velocity 0-50 m/sec, Accelerating upro 5g with a function selector switch	Vibration meter									
New Lab setup for M.E.Department, detail of items mentioned in Annexure 26	2.46	102000	ч	Consisting of : (a) Low-frequency power oscillator variable frequency generation of 0-2.5 kHz, Single phase 220-250V AC. (b) Vibrating table displacement max. 5mm, Acceleration 0-50	Electro Dynamic Exciter	Shopping	One Month	No	%.	ie No	Eqipmenus	Goods	GWECA:Mechanical/Vi bration Lab	Ψ
		13800	-	To conduct experiment on trifler suspension.	Trifler Suspension Apparatus									
		91200	-	Universal Vibration set up	Universal Vibration set up									
				R / F Switch, V-Belt & Fittings Rotary Table Of 36:1 Ratio Of 250mm In Diameter 8" x 3 Jaw Precision True Chuck										
		89450	1	SLOTTING MACHINE 150 mm. (6") Cap. AdjustableStroke 150 mm. (6") Cap. AdjustableStroke 3 Speed Counter System complete with all standard accessories such as Boring Bar, Motor Pulley & Counter V Belt. Electrical Such As 1 HP 1440 RPM 3 Phase Electric Motor	SLOTTING MACHINE		14							
		109550	-	Heavy Dury Radial L & Machine 25mm Cap / 6Speed/ 200mm Travel with FINE FEED Attachment & Box Table. Electrical such as I HP 1440 RPM 3 phase Ele Motor for Drilling 05 HP 1440 RPM 3 phase Ele Motor for Lifting R/F switch 2 Nos. V-Belt 2 Nos. with Fitting. having accessories two sets '\$" Drill Chuck, Arbour, Sleeve	Radial Drilling Machine			-						

			£		44				4			.	T	t	±	± [39		ا <u>ا</u>	_
	48 (ZWECA/Institute-Comp		47 GWECA Institute/ Multifunction princer		GWECA/Institute/ 46 Projecter		45 UPS & UPS Battery	OMECA Institute	Conditioner	GWECA Institute/Air		43 GWECA/Institute/Almir			Gweca Library Reading	40 GWECA/Library/Books		mistry Lab	38 GWECA Chemistry/Che	
	Goods		Goods		Goods	0	Goods		Spoor			Goods		Goods	Goods	Goods	Goods		Goods	
	Едшіртепі		Goods		Goods		Goods		SDOOF			Furniture		LR	Goods	Books	Equipment		Equipment	
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	One Month		One Month		One Month		One Month		One Mount	2		One Month		l Month	One Month	One Month	One Month		One Month	
So	shopping		shoping		shoping		shoping		Smdous	•		shoping		Shopping	shoping	Shopping	Shopping		Shopping	
(d) (d)	High Performance Computer	Colour Printer (for Librery)	Multifunction Printer		Projecter	UPS Battery	SAIN	LIS.	Portable AC	Split Air Conditioner	Almirah Library	Almirah with Locker (Deptt. IT)	Almirah	E- Journals/ E-Books	Table for Library	Reference and Text Book	Touch Screen monitor for reading section	Consumable	Fireextinguisher	Balance
	7th Generation Intel® Core™ 17-7500U Processor (4MB Cache, up to 3.5 GHz) Operating System:-Windows 10 Home Single Language 64bit English Microsoft Office latest professional Memory min 16GB. 2400MHz. DDR4 Hard Drive 2TB 5400 RPM SATA Hard Drive Video Card: Min 4GB Graphics Memory Display inch LED antiglate display or equivalent wheelest mouse and keyboard Warranty, Detail mentioned in	Colour Printer	Dury cycle (monthly, A4) Up to 65,000 pages Recommended monthly page volume 4000 to 8000 Dury cycle (monthly, letter) Up to 45,000 pages Print technology Laser Functions Print, Copy, Scan, Mac compatible Yes, Details mentioned in Annexure 16 (For CE Deptic)	scanner, printer photocopier, duplex printing support, ethernet and USB connectivity, (For IT and Library Thenatement, Details are in annexure 21)	Resolution . 1920X1080 Brightness: 3000/4000 Lumens Aspect Ratio: 16:9 (HD), Contrast ratio :- 20000.1 or better, Lamp Life :- 10000 Hrs or better, Zoom :- 1:1.1 or better, Projection Size :- 30*-300* or better With HDMI port, Details as	UPS Battery 42 AH (ANNEX,18)	15KVA online UPS	10 kVA online UPS and installation	3 ton Portable Ac with installation 5 star power rating	1.5/2 con Split Ac with installation 5star power rating	Almirah 72" x 36" x 18" with 04 compartment/22 Gauze with glass door	Almirah with 20 Locker, Size: 1980 x 915 x 482 mm or bioger, Body 11.25 Gauge, Shelves: 1,60 Gauge	Almirah 72" x 36" x 18" with 04 compartment/22 Gauze	E- Journals/ E-Books for UG and PG Students	Reading table for single person partition and sitting of 3 readers both side	As recommended from various departments for UG and PG Students	Touch Screen monitor for reading section	Glass Wares, Chemicals, Micropipeues, Thermometer, TLC Plates, mentioned in Annexure-32	Annexure-32 ABC Store Pressure, 4Kgs to 6 Kgs, mentioned in Annexure- 32	Max. Capacity: 450g Illion: 0 lmg, etc. mentioned in
3 *	J۱	1	-1	2	п	226	_	_ 4	10	14	45	1	36	α	10	T	2	Single Package	1	-
= -4	0.8	0.4	0.8	0.25	1	0.05	1,5	0.6	1.025	0.65	0.15	0.2	0.18	28	0.25		***	0.75	0.05	0.20
The state of the s	4		17		ш		5	I	10.25	9.1	6		668	8	2,5	15	2		-	
T TANK	Project Lab purpose	For printing of ID-cards with barcode	Various printing and scanning purpose		for lab and other teaching purpose in various Departments		for Fower pack up or Lans	Ga Parisa Back va of Labo	Air conditioning for Conference hall	Air conditioning for labs ungradation	To maintain lab record, files	corresponding package	As per mention in their	iournal and e-books	Table for Library	for academic Purpose	for Book enquiry in library		for Existing Lab	

(31)

				Call of the section o			-	1			PAR	G		
smart whiteboard replacing		9.0	2	License Software for Interactive White board, Camera, document camera & Writing PAD.	Interactive white hosta	7	KJ.	7	(A)	ā		E 111 3		
controlling all smart devices at single location.		ω.	ω	ANNEX 17 inclusive of all installations and trainings1)	Integrated Digital Podium with Speak (155)						1	0		
	10	10		Tools of Power sim., Power electronics (12 Users) etc.	>									
		0.2	-	Natistics and Machine learning (ooi box (UL User). Neural Network tool Box (Deep Learning) (O1 User)	С									
		0.2		Signal Processing Tool Box (OI User)										
(Annexure 2, 19)		0.2	-	Image Acquisition Toolbox (01 User) Parallel Computing Toolbox, (01 User)										
Upgradation of existing lab	5.80	0.2	_	Computer Vision System Toolbox (01 User)	MATLAB Software with specific Tool Box	h Contract	One Month	Ņ	å	Yes	LR	Goods	GWECA-lostitute/	45
B Tech & M Tech and For		0.2	_	Image Processing Toolbox (01 User)		2								
			- ;	LAB Software (10 User)										
		0.4	10	For CE Department MAT										
		1,15	_	Image Acquisition Tool box (For DSP Lab) (10 Users)										
	5.75	115	_	Optimization Tool box (For DSP Lab) (10 Users)										
		1725	-	Signal Processing Tool Box (For DSP Lab) (15 Users)										
		0.02	2	CD/DVD Portable ROM	CD/DVD Portable ROM									
		0.05	w	any make high speed usb 3.0 with cover /case	ITB HD External									
		0.07	^ lö	Nich cook class 10 I ISB 3 0										
				APPIEY 19										
		20	(a)	Memory OoS Support JPv4/JPv6 Support Advanced	Network Switch (24 Port)									
		3	,	PRODUCT HIGHLIGHTS 24 x 10/100/1000 PoE Ports 2 x Combo Mini-CRIC Ports 128 MB RAM 16 MB Flash										
				ANDIEV 18										
smoth functionality of IT services in the Institute	3.07	10,0	2	duplex modes 801 2x Flow Control Dynamic MAC address management IEEE802 1Q-based VLAN Auto Voice VLAN	Network Switch (8 Port)	h Shopping	One Month	N _o	N _o	: <u>v</u>	Equipment	Goods	carecal institute: Computer and Network Peripherals	53
For the upgradation and		2000	300	R. Bort Circhit Bor Computers, Annualization of cross and	CMOS Battery									
		0,000	3	for Deskron computer ANNEY 18										
		0,008	38	Switch Mode Power Supply	SMPS									
			,	Speed: 7200 fpm Interface: On Interface Speed: 7200 fpm Interface; On Interface Speed: 7200 fpm Interface; On Inte	narousk our Gr							00		
		0.025	uı	Device Type: 3.5 Inch HDD Drive Capacity: 500 GB Spin	Handlink SOO CR									
		0.025	5	2 Gb RAM, ANNEX I8	RAM 2GB									
		0.007	38	Optical Mouse with scroll Buttom, ANNEX, 18	Mouse									
		0.007	8	Digital YayRood ANNEY IR	Verbrand									
For Upgradation of existing lab	05	20.0	10	Rack with 5 Compartments of 6 nos. of shelves. Distance between each shelf will be 410 mm. (Annexure-15)	Rack for ECE (Annexure-15)	h shoping	One Month	No	N _o	No	Furniture	Goods	Gweca/Institute/Rack	52
for ME computer lab	663	0,102	8	Fabricated Computer table with MDF board having cable management system Annexute-29	Computer for Mechanical Department	G	Concentration	ě	ā	ž	FOLIAGOR	\$1000	terTabel	2
100	-	0.05	2.0	Comp. Table (Annexure-15, 20)	Annextre-15, 20)		One Month	5	N	Ž.	1		Gweca Institute/Compu	
For Upgradation of existing		90		Bio Metric Machine		+					- dille	00000	Metric Machine	۶
for the BBAMS Purpose for	15		-	Bio Metric Machine	Biometric for CC/IT Service	h shoping	One Month	N _O	Z	Z	Frimments	Conste	Gweca/Institute/Bio	5
Chairs for ME Computer Lab		0.04	8	back cushion with PVC beeding. Fabric tapestry Annexure-	Chairs									
				Chair fix type with PU arm, Pipe stand, PU molded seat &										
Chairs for Library	TOI	0.03	S 0	Oushion Chair	Chairs for Library	h shoping	One Month	S.	No	8	Goods	Goods	GWECA/Institute/Chair	49
Chairs for Auditorium		0.04	150	Chairs with arms made of Capsule pipe 1" x 16 Gague, seat and back good quality Cushion and good quality recine covered, rubber pad arms, seat size 16" x 16" and back size	Chairs for Auditiourm									
for Mechanical CAD Cam lab & one for Physics	45.6	0.6	76	Windows 10 64-bit, Intel i-5 (7th generation) processor (3.4 GHz) and above, 8 GB or above RAM DDR4, 1 TB or Above Hard Disk Drive, 4 GB or Above Dedicated Graphic Card, 21" LED Monitor Annexure-28	Computers									
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ner)	397	♂

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	693,6203	Services)	orks and	Grand Total (Goods, Works and Services)							1	>		-
	23	Grand Total	6								>	0		-
For Audit and Account are very essential part of Budget	3	3 (for 3 years)	_	TEQIP-III Accounts	Audit & CA Services	ជ	1 Month	NO	NO	No	Services	Service	GWECA/Accounts/Audi	
For Construction	5	5 (for 3 years)	-	Construction	Construction	ឆ្ន	1 Month	NO	NO	NO	Services	Service	GWECA/Architectural 62 & constructional &	
To Enhance Placement by assessing the students before placement	15	1500	1000	Assessment of student for placement on Industrial parameters with web portal supports	Pro Placement Assesment Test	ľ	l Month	NO	NO	No	Services	Service		
													C) Services	- 1
	71.2	Grand Total	6											
For UG and PG Students Projects	12	12	-	P & Fanodized aluminum work for doors, windows, ventilators etc. shutters including P & F hings/rollers etc., P & F 12 mm Thick Preleminated three layer medium density, partical board grade J, type II, Pre laminated partical board with decorative lemination on both sides with glass panes of 5.0 mm thickness, P & F double action hydraulte floor spring of approved brand for Partition in ECE research lab	Pariration	shopp ing	1 Monch	N	N	×.	Refurbish	Works	60 GWECA/Cavil/Research	
Maintenance	20	20	_	As per CPWD/State PWD BSR	Building repair work in college	shopping	1 Month	Ņ.	DO	no	Repair	Work	59 GWECA Civil Building repair work in college	
Extension for Library	85	૪	_	As per CPWD/State PWD BSR	Extension of Central Library	shopping	l Month	N _o	No	70	Extention	Works	58 GWECA/Library Excens ion of Central Library	
													B) Works	
	599,42025	Grand Total	6											
plagiansm detection of the thesis and project reports for whole college		4	1	10 admin and 100 student license one year 2018-19	Plagiarism detection software	Direct Contract	One Month	N _o	No	Yes	LR	Goods	GWECA/Institute/Plagi 57 arism detection software for 2018-19	
plagiarism detection of the thesis and project reports for whole college	-4-	.45.	1	10 admin and 100 student license one year 2017-18	Plagiarism detection software	Direct Contract	One Month	No	N _o	Yes	J.R.	Goods	GWECA/Institute/Plagi 56 arism detection software for 2017-18	
projection of documents from books to screen		0.2	w		Document Camera									
For Projector Type 1		4.5	-	class rooms (12 Visit minimum, and on Call when required)	Projection screen									_
for video conferencing, live lectures and lecture recordings		15	2	AMC charges per year on regular visit basis (at least once in a month) or on call when required for smooth operation of all classrooms from the 2nd year to quote for 1 year for 2	HD video camera with Virtual Classroom software									
for presentation support		0,02	*	AMC and support:	wireless presentor									
projectors for other smart classrooms cum seminar hall	24,08	0.8	2	out of which 1st Year Comprehensive Warranty with manpower support	Projector Type 2	Shopping	One Month	W	N _o	Ş	Equipment	Goods	5S GWECA/Institute/smart classroom	
For digital writing		0.2	2	passive components (except consumable items like Projector	Writing Pad									_
porjector for auditorium cum conference hall		2.5	-	I years warranty on all the products for all active and	Projector Type 1									
For controlling and installing toftware		0.4	ω	classroom WARRANTY and Maintenance	CPU									

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