Schedule of supply

Contents

- 1. List of Goods and Related Services
- 2. Delivery and Completion Schedule
- 3. Technical Specifications
- 4. Drawings

1. List of Goods and Related Services

Package Name: Supply of "ELECTRONICS WORKSHOP HAND TOOLS & EQUIPMENT" of Government Polytechnic (Women), Rehan Distt. Kangra to enhance technical and vocational skills among the youth of Himachal Pradesh. HPSDP-DoTE/WP/19; RFQ No. GPR/19/2022

	age Name: <i>ELE</i>	ENT	Delivery Time (in days): not more than 180						
Item No	Name of Goods or Related Services	Description	Unit of Measurement	Quantity	Unit Price INR	Fotal price per item INR	Sales and other taxes per item	Total Price (Including GST)	Remarks(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	Knife double bladed Electrician- 100mm	Knife double bladed electrician type: Knife double bladed size: 10mm material: stainless steel double bladed locking electricians knife with hard wood handle pocket knife type conforming to ISI or equivalent standard	No	20					
2	Screw driver	screw driver complete set material high grade steel handle transparent green cellulose acetate insulated stem conforming to ISI or equivalent standard	Set	5					
3	De-soldering Gun	De- soldering gun - heat proof nozzle, PVC type 250mm. Power rating = 80W temperature setting range = 250-450°c power cord length = 1.5m - operating voltage : 220-240V - Conforming to ISI or equivalent standards	No	4					

	<u> </u>				<u>- </u>				
		Crimping tool (7 in 1)	Set						
		suitable for crimping ,							
		cutting and stripping BNC,	2.5						
		RJ - 45 CAT 5,CAT 5e					· ·		
		and Cat 6 Connectors -				'			
4	Crimping tool	operation type: manual					•		-
7	(7 in 1)	material steel and plastic		4					
		handle - die less							
		operation- crimping range		. '					
		from 1.5mm ² to 16 mm ²							-
		conforming to ISI		,	* .		·		
	<u>, </u>	standards							
		Thin connector screw	No						
		driver - insulated handle					9		
		type : insulated handle							· ·
		thin connector screw							
		driver : steel or alloy steel.							
		Handle : insulated plastic				-	·		
	Thin connector	or fibre or cellulose		. '			-		
5	screw driver	acetate (CA) material		5					
	insulated handle	blades of screw driver					*		
		shall be plated with nickel							
		chromium or zinc or by							
		any other suitable							
		process. Standard IS :							
		844 or equivalent						,	
	<u> </u>	standard							
		Digital tachometer -	No.						
		suitable for measurement							
		of RPM of motors							
		mixtures pumps fans etc							
		type : contact type digital						,	
		tachometer hand held -			-				
_		measuring range upto		1.					
6	Digital Tachometer	99999 RPM - resolution :		5					
		0.1 RPM < 999.9 RPM, 1							
		RPM > 1000, RPM -							
		display : preferably LCD				1	,		
		or LED display - auto							•
		power off facility -							
		conforming to ISI or							
		equivalent standards							
							·		

7	Screw driver set of min 5 bits (combination of star	screw driver set of min 5 bits (combination of star and minus) +1 etc rod - material : carbon steel , - handle : insulated plastic	Set	E				
,	and minus) +1 etc rod	or fibre or cellulose acetate (CA) material - conforming to ISI or equivalent		5				
8	Soldering iron	Soldering iron copper bit 25,35,40,W (1 each)	No	20 Each				
9	Hand plug tools steel	set of hand plug tools steel 8,9, 10 nos	Set	2				
10	Hand vice	Hand Vice 25,50,100,150 nos	No	2 Each				
11	Battery charger	Battery charger 6,12,24,48,volts	No	2 Each				
12	High rate discharge battery cell tester	High rate discharge battery cell tester	No	2				
13	Electrical kettle	Electrical kettle 1& 2 Ltrs	No	2 Each				
14	Electronic Energy Meter 5- 30Amp,240V	Electronic Energy Meter 5-30Amp,240V	No	2				
15	Electric Heater 1000,2000 watt	Electric Heater 1000,2000 watt	No	2	,		,	
16	Heat Convector	Heat Convector 2000 Watt	No	2				
17	Electric Oven	Electric Oven 30-250 degree temperature	No	1				
18	Multimeter Analog Type	Multimeter Analog Type	No	10				
19	Ampere Meter	Ampere Meter 0- 40 Amp	No	5				
20	Volt meter 0- 500 Volts	Volt meter 0- 500 Volts	No	5				
21	Latest complete hand tool kit	Latest complete hand tool kit (for General workshop)	Set	5		,		
22	Insulation tester	Insulation tester Digital &	No	2 Each				
		and the second s			 		<u> </u>	

							<u> </u>
	Digital & Analog	Analog					
		DC voltage 200m /20/200/1000 Volts , AC Voltage 200 M 2/20/200/ 750 Volts DC current : 20 micro	No				
23	Digital Multimeter	/200micro/2m/200m/10 A AC current :20 Micro/200 micro/2m/200m/2/10 A Resistance : 200/2K		10			
		/20K/200 K/2M/20M ohm Capacity :2ll /20ll /200ll /2ll /20ll Frequency : 20 kHz to 2000kHz circuit control : Yes		:			
		Diodes Control : Yes Frequency : 20 kHz to 2000kHz					
		CRO Bandwidth AC 10 Hz ~ 30 MHz (-3 db) DC ~ 30 MHz Y Deflection high milli volt / div ~ 20 V Per/Div Max In 400 V (DC + AC p-p) Sweep	No				
24	CRO	mode Auto , Trig ,Lock ,single Sweep rate Frequency Response AC 10Hz ~1 MHz - 3 db Dc 0 ~1 MHz -3db min IN level TTL level Waveform		5			
		:Sq Sine Wave Z Max In 400 Volts Frequency 1KHz ± 2% Amplitude 0.5 V p-p					
25	Function generator	no. of channels :2 , waveform : Sine, Sq, Pulse, ramp, triangle, Sine Wave Freq range : 1 Micro Hz - 250 MHz , total harmonic distortion :0.5%,	No	5			

		Sq. Wave Frequency							
		range 1 Micro Hz to 120						, 1	
		MHz, Rise / fall time ≤ 2.5							
		, Ramp wave : Freq.		A Company			·.		
		Range 1 Micro Hz - 5						1	
		MHz , Pulse Freq. Range							•
		1 micro Hz to 50 MHz						'	
	4	Amplitude ≤ 100 MHz : 5	* *				4	1	·
		Vp-p: accuracy : ±1 % of				*		. !	
		setting ±1 milli volt p-p		-					. [
		Resolution 0.1 milli volt ,							
	'	modulation :						. !	1
		AM,FM,PM,ASK,FSK,PS					*		
		K Power Voltage 240 V ,							
		50 Hz Display : TFT LCD			i				
		type	<u> </u>				,		· ·
	e e	Specifications for RF	No						
		Signal Generator		*					
		Type RF Signal Generator		1					
		Frequency Range 9 KHz							
	·	to 3 GHz							
		Frequency Resolution 0.1					·		
		Hz							
		Ageing Rate For							
		Reference Frequency (As							
		Declared By OEM)			*				
		Less than 2 PPM/Year							·
		Temperature Stability For				4			
26	Signal Generator	Reference Frequency		5	٠.			· .	, ,
	Signal Certerator	Less than 2 PPM		3					
		SSB Phase Noise At							i.
		1GHz,on 20KHz Offset							
,		(dBc/Hz)							
		less than -95 dBc			·				
*		Harmonics At 3 GHz					*		
		Level At 0 DBm							
		less than -30 dBc							
		Non Harmonics (>10 KHz			<u> </u>				
	******* •	Carrier Offset)			-				
		less than -50 dBc							
	* .	Reverse Power							
	·	Protection							

100	·			,				
	2Watt							
	Minimum Output Level -		*	in the second second				
	120dBm						1 + 1 + 1 + 1 + 1 + 1 + 1 + 1 + 1 + 1 +].
	Maximum Output Level							
	+13dBm				- '			
	Output Level Resolution		2 T					
	0.1dB							·
	VSWR On All Operating			1.				
	Frequencies							·
	2 Memory (Minimum							
	Storage Settings)100						-	
	Amplitude Modulation							
	(AM) Operating Modes							• •
	Internal &External			-				
	Minimum Amplitude	, and the second						
	Modulation Frequency (3	1	-					
	DB),F>100KHz					200		
	20Hz							
	Maximum Amplitude							
	Modulation Frequency (3							
	DB),F>100KHz	÷	,	į				·
	20KHz					•		
	Modulation Depth 0 to							
	100%			·				
	Resolution Of AM 0.1			·				
	Frequency Modulation							
	(FM) Operating Modes							
	Internal &External		-	-				·
	Minimum Frequency	*		4	·			
	Modulation Frequency (-3							
	DB)Standard							
	20Maximum Frequency							· ·
	Modulation Frequency (-3							
	DB)Standard80			·				
	Minimum Frequency			*				·
	Deviation			er.				
	0.02 Maximum Frequency					1		
	Deviation	,						
	100KHz.			•				
	Resolution Of FM 1% min,	_	·					
	1Hz							
	Phase Modulation		•				·	
								

			· · · · · · · · · · · · · · · · · · ·					i fara i	
	Operating Mode		1						
	Internal &External				* .				
	Minimum Phase								
	Deviation								
	0 Radians						44 - 4		
•	Maximum Phase								P
	Deviation			-					
	10Radians				1,000				
	Resolution Of Phase								
	Modulation					·			,-
	1%				6				
	Internal Modulation		.] :			,			
	Generator For AM/FM/PM								
				4 .		•			
	20 Hz to 80 KHz with								*
	resolution of 0.1 Hz	-							
	Pulse Modulation								
	Operating Modes							,	
	Internal&External			}					
*	On/Off Ratio >80 dB dB								*
	Minimum Pulse Width								
	10000ns		·					,	
	Input Level TTL	•							
	RF Digital Sweep Range	,							
	And Width								
	9 KHz to 3 GHz				-	· ·			
	RF Digital Sweep Time	,							
	Range								
	500 ms to 10 sec					•			
	Range Of Modulating			·	·				
	Signal (Narrow Mode)		· ·						
	20Hz to 80KHz								
	Interface Available			-	-				
	USB/IEEE 488, RS 232								
	Standard Accessories								
	(To Be Supplied)								
	Powe Cable, N(M) to		1						
	PNC(F) Adat PNC M to				*				
	BNC(F) Adpt, BNC M to								
	BNC M Coaxial								*
	Cable, 2 amp fuse, GPIB	· .			,				
	Cable, DC Cable, 50 to 75		1						
	ОНМ	* *							
	Adpt, Dust Cover, User		-					j .	

		the state of the s	<u>. 4 </u>						
		hand book Power Requirements 230 V +/-10% AC, 50 Hz +/- 3%							
		Operating Temperature Range 0 to 45 Degree C Degree C						•	
. 6		Operating Humidity (RH) Should withstand 95% RH at 45 Degree C							
		DISPLAY METHOD LED DIGITAL DISPLAY INPUT VOLTAGE AC 240 +- 10% 50HZ	No		·				
27	Soldering Station	POWER 60W OUTPUT		10					
		AC 24W HEATER CERAMIC HEATER TEMPERATURE RANGE							
		200 C ~ 480 C (392 F ~ 896 F) O/P Voltage – 0~30V	No						
28	DC Regulated Power supply dual output	O/p Current – 0~5A FIXED O/P – 5V,2A Standard Accessories – Soft Carrying case and Manual	NO	5					
	·	Dimension – 132(H) x 55(W) x 168(D) mm							
	DSO(Digital Storage	1 Isolated Channels 4 2 a) Sampling / Channel 2.0 G samples/s minimum b) Bandwidth 200 MHz or more 3 Isolation Float	No			1			
29	Oscilloscope)	Voltage 600 Vrms Min (reference to earth) CAT-II 4 Isolation Float Voltage 1200 Vrms Min (channel		1					
	<u> </u>	reference to channel		L			<u></u>	<u> </u>	·

					<u> </u>				
		reference) CAT-II 5							
		Maximum Input Voltage							
		300 Vrms (tip to reference							
		of standard passive							
٠		probes), 1000 Vrms (tip to					100		
		reference of high voltage					*		
		passive probe) CAT-II 6							
		Vertical Resolution At							
		Least 8 Bits 7 Record							
		Length 2500 points 8 DC							· · · · · · · · · · · · · · · · · · ·
		Gain Accuracy ± 3 % 9	N			İ .			
		Horizontal Accuracy ± 50							
		ppm 10 Linear dynamic							
		range ± 5V 11 Sensitivity		,					
		2 mV to 200 mV per div. ±							· ·
		2V; >200mV to 5V/div. ±			-				
		50V 12 Time/Division							
		Range 2.5 ns to	4						
									-
		50s/division 13 Horizontal			Ì				·
		Zoom Trigger modes							
		Auto, Normal, Single shot						er .	
		Source All four channels							
		and External Edge (rising,							
		falling) level, pos/neg							
	· .	slope on any channel							
		Spindle Speed: 6000-		.*					
		30000rpm (variable,		-					
		adjustable in 7 step							
		increments)							
		Base Plate Width: 120mm							
		Throat Depth: 120mm							
		Vertical Travel: 21mm							
	PCB Drilling	Motor: 135W							
30	Machine	Weight: TBC		2					
	Machine	Dimensions: 120mm x	. 1						
		120mm (stand base plate)						•	
	·	Power Requirements:							
		240V, 13A Socket							
	,	Warranty: 1 Year Return							
		to Base (UK Mainland)		,				,	
		1 Year Return and Collect		•					
		(Elsewhere)							
		\		<u> </u>	<u> </u>		1	<u> </u>	

31	PA System	Professional EON one Compact- All-In-One Battery Powered portable PA with Professional Grade mixer swappable battery ,fast battery charging, smart feature to lower music volume when	Set	1		•		
	LOD	speech input detected LCD 55"	No	1			 	
32	LCD	LCD 55		<u> </u>			 <u> </u>	
33	Audio oscillator	freq. range - 20 Hz to 20 KHz in 4 decades range ,Accuracy- ± 2% ,± 1 Hz, wave form- sine and sq wave ,o/p voltage- 0-10 volts continuously variable/p impedance - 600 ohms, distortion - less than 1%	No	5		-		
					Total :			

Grand Total	Total price per item (INR)(7= 5*6)	Total Price (Including GST) (9=7+8)
Grand Total (Without Tax) in Words: -	·	

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
Package Name: - EL & EQUIPMENT Package No.: - HPS	ECTRONICS WORKSHOP HAND TOOLS DP-DOTE/WP/19	Within 90 Days from the Signing of the contract.	Government Polytechnic(Women), Rehan District-Kangra, Himachal Pradesh	Within 90 Days from the Signing of the contract.

3. Technical Specifications

Package Name: - ELECTRONICS WORKSHOP HAND TOOLS & EQUIPMENT Installation & Training of all items at: Government Polytechnic (women), Rehan Distt. Kangra HP in Himachal Pradesh

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	Warranty of Equipment/pa rts
1.	Knife double bladed Electrician- 100mm	Knife double bladed electrician type: Knife double bladed size: 10mm material: stainless steel double bladed locking electricians knife with hard wood handle pocket knife type conforming to ISI or equivalent standard	Standard	Dust protection and Storage Cover	Standard	Standard	
2.	Screw driver	screw driver complete set material high grade steel handle transparent green cellulose acetate insulated stem conforming to ISI or equivalent standard	Hard ended and tempered comfortable grip non flammable and non affected by grease oil.	Dust protection and Storage Cover	Standard	warranty certificates operating manual/user manual, contact detail of local service providers	
3.	De-soldering Gun	De- soldering gun - heat proof nozzle, PVC type 250mm. Power rating = 80W temperature setting range = 250-450°c power cord length = 1.5m - operating voltage : 220-240V - Conforming to ISI or equivalent standards	Standard	Nozzle cleaning kit heat resistant pipe/stand. Dust protect iron ion and storage cover/ case. Other standard accessories	1 spare nozzle- other standard spare parts	Warranty certificates operating manual/user manual, contact detail of local service providers	
4.	Crimping tool (7 in 1)	Crimping tool (7 in 1) suitable for crimping, cutting and stripping BNC, RJ - 45 CAT 5,CAT 5e and Cat 6 Connectors - operation type: manual material: steel and plastic handle – die less operation-	Easy to handle compatible die types: BNC,RJ-45	Dust protect iron ion and storage cover/ case	Standard	Warranty certificates operating manual/user manual, contact	

		orimning rongs from 4 Emans ² 4, 40	T107 047 5			1	<u> </u>
		crimping range from 1.5mm ² to 16 mm ²	MX CAT 5,			detail of local	
		conforming to ISI standards	CAT 5e &			service	
			CAT 6		,	providers	
			connectors				
			this jaw is	<u> </u>			
	,	•	made from EN				
			19 for going				
			flat to	·			
			accommodate				
	·		to all length of				
			end sleeves-				
]			handle made].
			from spring				
			steel / rapper				
	•		grips provided				:
		·	ergonomic	,			
5.			handling				
5.			The Handle				
			shall be				
			provided with				
			proper				
			serrations so				
		This	that the				
		Thin connector screw driver - insulated	handles do			Warranty	
 .		handle type : insulated handle thin	not slip during				,
	This seements	connector screw driver : steel or alloy	usage. the			certificates	
	Thin connector	steel. Handle : insulated plastic or fibre or	handle shall	Dust protect iron		operating	
	screw driver	cellulose acetate (CA) material blades of	be finished	ion and storage	Standard	manual/user	
	insulated handle	screw driver shall be plated with nickel	smooth and	cover/ case		manual, contact	
		chromium or zinc or by any other suitable	shall be			detail of local	
	+	process. Standard IS: 844 or equivalent	convenient for		·	service	
		standard	holding- the			providers	
	+		screw driver				
			point shall be			-	
* *			ground		•		
				,			

7.	Digital Tachometer	Digital tachometer -suitable for measurement of RPM of motors mixtures pumps fans etc type: contact type digital tachometer hand held - measuring range upto 99999 RPM - resolution: 0.1 RPM < 999.9 RPM; 1 RPM > 1000, RPM - display: preferably LCD or LED display - auto power off facility - conforming to ISI or equivalent standards	memory facility to retain measured value, portable, light weight - moulded body- anti slippage body type- other standard features	Dust protect iron ion and storage cover/ case	Standard manual / user manual - contact details of local service provider	warranty certificates operating manual/user manual, contact detail of local service providers	
p	Screw driver set of min 5 bits (combination of star and minus) +1 etc rod	screw driver set of min 5 bits (combination of star and minus) +1 etc rod - material : carbon steel , - handle : insulated plastic or fibre or cellulose acetate (CA) material - conforming to ISI or equivalent .	Standard	Standard	Standard	warranty certificates operating manual/user manual, contact detail of local service providers	
8.	Soldering iron	set of soldering iron copper bit 25,35,40,W(1 each)	Standard	Standard	Standard	Warranty certificates operating manual/user manual, contact detail of local service providers	
9.	e Hand plug tools steel	set of hand plug tools steel 8,9, 10 nos	Standard	Standard	Standard	Warranty certificates operating manual/user manual, contact detail of local service providers	

10.				,		T	
10.						Warranty	
					Standard	certificates	
	i i		•	,	manual / user	operating	
	Hand vice	set hand vice 25,50,100,150 nos	Standard	Standard	manual -	manual/user	
	Tidina vice	30t Harid Vice 20,30, 100, 100 1103	Statiualu	Standard	contact details	manual, contact	
				,	of local service	detail of local	
					provider	service	
0					provide:	providers	
11.						Warranty	
						certificates	
				•		operating	
1						manual/user	
	Battery charger	Battery charger 6,12,24,48,volts	Standard	Standard	Standard		
		·	·			manual, contact	
	,					detail of local	
						service	
12.						providers	
12.					*	Warranty	
						certificates	
	High rate					operating	
	discharge battery	High rate discharge battery cell tester	Standard	Standard	Standard	manual/user	
	cell tester	riigir rate diseriarge battery cen tester	Otanuaru	Stanuaru	Stantuaru	manual, contact	
						detail of local	
		·				service	
						providers	
13.						Warranty	
						certificates	
						operating	
	F1(1)	-,	_			manual/user	
	Electrical kettle	Electrical kettle 1& 2 Ltr	Standard	Standard	Standard	manual, contact	
}							
						detail of local	
		,				service	
14.						providers	
14.						Warranty	
	Electronic Energy					certificates	
•	Meter 5-	Electronic Energy Meter 5-30Amp,240V	Standard	Standard	Standard	operating	
	30Amp,240V		Clarigara	otanuaru	Otanuaru	manual/user	
						manual, contact	
			·			detail of local	

						service	
					*	providers	
15.						Warranty	
						certificates	
	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \		N.			operating	
	Electric Heater	Floatric Haster 1000 2000				manual/user	
	1000,2000 watt	Electric Heater 1000,2000 watt	Standard	Standard	Standard	manual, contact	
			"	•		detail of local	
						service	
						providers	
16.						Warranty	
						certificates	
						operating	
	Heat Convector	Heat Convector 2000 Watt	Standard	Standard	Standard	manual/user	
			Claridara	Otaridard	Standard	manual, contact	
					4	detail of local	
						service	
17.						providers	
17.						Warranty	with
						certificates	
						operating	
	Electric Oven	Electric Oven 30-250 degree temperature	Standard	Standard	Standard	manual/user	
						manual, contact detail of local	
						service	
						providers	
18.						Warranty	
					Standard	certificates	
					manual / user	operating	
	Multimeter Analog	Multimeter Analog Type	Standard	Otan de sel	manual -	manual/user	
	Туре	Multimeter Analog Type	Standard	Standard	contact details	manual, contact	•
					of local service	detail of local	
					provider	service	
40						providers	
19.					Standard	Warranty	
	Ampere Meter	Ampere Meter 0- 40 Amp	Standard	Standard	manual / user	certificates	• •
	, ampere meter		Standard	Juliana	manual -	operating	;
	<u> </u>		<u> </u>		contact details	manual/user	

					of local service	manual, contact	
					provider	detail of local	
					•	service	
20.						providers	
20.			the second second		01	Warranty	
		·			Standard	certificates	
	Volt meter 0- 500	Volt meter 0- 500 Volts			manual / user manual -	operating	
	Volts		Standard	Standard	contact details	manual/user manual, contact	
					of local service	detail of local	
				·	provider	service	
					provider	providers	
21.						Warranty	
					Standard	certificates	
	Latest complete	·	4		manual / user	operating	
	hand tool kit (for	Latest complete hand tool kit (for General	Standard	Standard	manual -	manual/user	
	General workshop	workshop)	Otandara	Otandard	contact details	manual, contact	
)		•		of local service	detail of local	
·					provider	service	
22.					-	providers	
22.					Standard	Warranty certificates	
				·	manual / user	operating	
	Insulation tester				manual -	manual/user	
	Digital & Analog	Insulation tester Digital & Analog	Standard	Standard	contact details	manual, contact	. 6
					of local service	detail of local	
					provider	service	
					ļ ·	providers	
23.	·	DC voltage 200m /20/200/1000 Volts ,					
		AC Voltage 200 M 2/20/200/ 750 Volts				Warranty	
		DC current : 20 micro			Standard	certificates	
	,	/200micro/2m/200m/10 A			manual / user	operating	
	Digital Multimeter	AC current :20 Micro/200 micro/2m/200m/2/10 A	Standard	Standard	manual -	manual/user	
*		Resistance : 200/2K /20K/200 K/2M/20			contact details	manual, contact	
. *		M/200 M ohm			of local service	detail of local	
		Capacity :20 /200 /200 /20 /200		,	provider	service	
		Frequency: 20 kHz to 2000kHz				providers	

					·		<u> </u>
· .	_	-circuit control : Yes					
		Diodes Control : Yes					
		Frequency: 20 kHz to 2000kHz		1		. •	4
24.		CRO Bandwidth AC 10 Hz ~ 30 MHz (-3					
		db) DC ~ 30 MHz Y Detection high milli			1 1		
		volt / div ~ 20 V Per/Div Max In 400 V				, ,	
		(DC + AC p-p) Sweep mode Auto , Trig					
		,Lock ,single Sweep rate Frequency					
	· ·	Response AC 10Hz ~1 MHz - 3 db Dc 0					
		~1 MHz -3db min IN level TTL level				Warranty	
	,	Waveform :Sq Sine Wave Z Max In 400			Standard	certificates	
	*	Volts Frequency 1KHz ± 2% Amplitude		Dawas Chass to	manual / user	operating	
	CRO	0.5 V p-p	04	Power Chord ,two	manual -	manual/user	
	ONO	0.3 V p-p	Standard	2MHz oscilloscope	contact details	manual, contact	
				Probes ,Manual	of local service	detail of local	
			4		provider	service	
				1	provider	providers	
						providers	
					-		
25.		no. of channels :2 , waveform : Sine, Sq,					
		Pulse, ramp, triangle, Sine Wave Freq					
		range : 1 Micro Hz - 250 MHz , total					
		harmonic distortion :0.5%, Sq wave				warranty	
		Frequency range 1 Micro Hz to 120 MHz,				certificates	
	Function	Rise / fall time ≤ 2.5 , Ramp wave : Frq				operating	
	generator	Range 1 Micro Hz - 5 MHz Pulse Frg	Standard	Standard	Standard	manual/user	
	generator	Range 1 micro Hz to 50 MHz Amplitude ≤			Canaa	manual, contact	
	,	100 MHz : 5 Vp-p: accuracy : ±1 % of				detail of local	
		setting ±1 milli volt p-p Resolution 0.1				service	
		milli volt, modulation:				providers	
		AM,FM,PM,ASK,FSK,PSK Power Voltage			· .		
		240 V , 50 Hz Display : TFT LCD type		4			
26.		Specifications for RF Signal Generator				100	
	Signal Generator	Type RFSignal Generator	Cton dowd	Otom do not	01	Warranty	
	Orginal Ocherator		Standard	Standard	Standard	certificates	
		Frequency Range 9 KHz to 3 GHz	L			operating	

			_			
Frequency Resolution	0.1 Hz				manual/user	
Ageing Rate For				**	manual, contact	
Reference Frequency	(As Declared By				detail of local	•
OEM)				**	service	
Less than 2 PPM/Year	Temperature				providers	
Stability For Reference	Frequency Less					
than 2 PPM					-	·
SSB Phase Noise At 1	GHz,on 20KHz					
Offset						
(dBc/Hz) less than -95	dBc Harmonics At					
3 GHzLevel At 0 DBml	ess than -30 dBc					
Non Harmonics (>10 K	(Hz Carrier Offset)					
less than -50 dBcReve	rse Power					
Protection						
2 Watt Minimum Outpu	It Level -120 dBm					
Maximum Output Leve						
Output Level Resolutio						
VSWR On All Operatin 2Memory (Minimum St	ig riequencies					:
100 Amplitude Modula	tion (AM) Operating				•	
Modes Internal &Exteri	non (Alvi) Operating					
Amplitude Modulation I	Frequency (3DP) E					
>100 KHz 20 Hz Maxir	num Amplitudo					, i
Modulation Frequency						
KHz	(0 00), 1 > 100			.		
20 KHz Modulation De	oth 0 to 100 %		·			
Resolution Of AM 0.1 F						
Modulation	. a quanta j					
(FM) Operating Modes	Internal &External					
Minimum Frequency M	odulation			·		
Frequency (-3 DB) Sta	ndard 20 Maximum					
Frequency						
Modulation Frequency	(-3 DB) Standard					
80 Minimum Frequency	Deviation 0.02	•				
Maximum Frequency D	eviation 100 KHz	*				
Resolution Of FM 1% n	nin, 1 Hz Phase	•	,		•	
Modulation Operating N				, ,		
&External Minimum Ph	ase Deviation			* *		

·	T						
	1	Radians Maximum Phase Deviation					
		10 Radians Resolution Of Phase					
		Modulation		•			
		1 % Internal Modulation Generator For					
<i>:</i> [1 4	AM/FM/PM 20 Hz to 80 KHz with	1 , 1				
	*	resolution of 0.1 Hz Pulse Modulation					
1		Operating Modes	1.6	l		1	
		Internal &External On/Off Ratio >80 dB dB			·		
		Minimum Pulse Width 10000 ns					
		Input Level TTL RF Digital Sweep Range					
		And Width 9 KHz to 3 GHz RF Digital		·			
		Sweep Time Range 500 ms to 10 sec					
		Panga Of Madulating Cines (A)					'
	,	Range Of Modulating Signal (Narrow					
		Mode)					
		20Hz to 80 KHz Interface Available					
		USB/IEEE 488, RS 232 Standard					
		Accessories			•		
	1	(To Be Supplied) Powe Cable, N(M) to		*			
		BNC(F) Adpt, BNC M to BNC M Coaxial					
		Cable, 2 amp fuse,GPIB Cable, DC					
	V 4	Cable, 50 to 75 OHM Adpt, Dust Cover,				<u>'</u>	
		User hand book					
		Power Requirements 230 V +/-10% AC,					
		50 Hz +/- 3% Operating Temperature					
		Range					
		0 to 45 Degree C Degree C					
		Operating Humidity (RH) Should			•	·	
		withstand 95% RH at 45 Degree C					
27.		DISPLAY METHOD LED					<u>.</u>
		DIGITAL DISPLAY				1	
						Warranty	
	1					certificates	
		10% 50HZ	,			operating	
	Soldering Station	POWER 60W	Standard	Standard	Standard	manual/user	
		OUTPUT AC 24W	Standard .	Glandald	Stariuaru	manual,contact	
		HEATER				detail of local	
		CERAMIC HEATER	٠.			service	
		TEMPERATURE RANGE 200 C ~ 480 C				providers	
		(392 F ~ 896 F)		,		providers	

28.		O/P Voltage - 0~30V				Warranty certificates	
	DC Regulated Power supply dual	O/p Current - 0~5A FIXED O/P - 5V,2A Standard Accessories - Soft Carrying case and	Standard	Standard	Standard	operating manual/user manual,contact	
	output	Manual Dimension - 132(H) x 55(W) x 168(D) mm				detail of local service providers	
9.		1 Isolated Channels 4 2 a) Sampling /				p.ottao.o	
		Channel 2.0 G samples/s minimum b)					
		Bandwidth 200 MHz or more 3 Isolation					
-		Float Voltage 600 Vrms Min (reference to				•	
		earth) CAT-II 4 Isolation Float Voltage	*				
		1200 Vrms Min (channel reference to					
		channel reference) CAT-II 5 Maximum					
		Input Voltage 300 Vrms (tip to reference					
		of standard passive probes), 1000 Vrms				Warranty	
		(tip to reference of high voltage passive			•	certificates	
	DSO(Digital Storage	probe) CAT-II 6 Vertical Resolution At				operating	
	Oscilloscope)	Least 8 Bits 7 Record Length 2500 points	Standard	Standard	Standard	manual/user	
	Oscilloscope j					manual,contact detail of local	
		8 DC Gain Accuracy ± 3 % 9 Horizontal				service	
		Accuracy ± 50 ppm 10 Linear dynamic				providers	
		range ± 5V 11 Sensitivity 2 mV to 200 mV			*	p. G. M. G. G.	
		per div. ± 2V; >200mV to 5V/div. ± 50V 12				*	
		Time/Division Range 2.5 ns to					
		50s/division 13 Horizontal Zoom Trigger					
		Trigger modes Auto, Normal, Single shot					
		Source All four channels and External					
	•	Edge (rising, falling) level, pos/neg slope	* .				
		on any channel			,		
).		Spindle Speed: 6000-30000rpm (variable,				Warranty	
	PCB Drilling	adjustable in 7 step increments)				certificates	
	Machine	Base Plate Width: 120mm	Standard	Standard	Standard	operating	
		Throat Depth: 120mm	4			manual/user	
.						manual,contact	
*			30				

		Vertical Travel: 21mm Motor: 135W Weight: TBC Dimensions: 120mm x 120mm (stand baseplate) Power Requirements: 240V, 13A Socket Warranty: 1 Year Return to Base (UK Mainland) 1 Year Return and Collect (Elsewhere)				detail of local service providers	
31.	PA system	Professional EON one Compact- All-In-One Battery Powered portable PA with Professional Grade mixer swapable battery ,fast battery charging ,smart feature to lower music volume when speech input detected	Standard	Aux ,phantom power support and condenser mic and other standard accessories	Standard	Warranty certificates operating manual/user manual,contact detail of local service providers	
	LCD	LCD 55"	Standard	*.	Standard		
33.	Audio oscillator	frq range - 20 Hz to 20 KHz in 4 decades range ,Accuracy- ± 2% ,± 1 Hz, wave form- sine and sq wave, o/p voltage- 0-10 volts continuously variable o/p impedance - 600 ohms, distortion - less than 1%	Standard	Aux ,phantom power support and condenser mic and other standard accessories	Standard	Warranty certificates operating manual/user manual,contact detail of local service providers	

4. Drawings

Not Applicable