Module Name : MTech Electronics and Communication Engineering-E
Exam Date : 18-Sep-2020 Batch : 09:00-11:00

Sr. No.	Client Question ID	Question Body and Alternatives	Marks	Negative Marks
Objective Question				
1	1	The ripple factor in a Full wave rectifier without filter is A1 : 0.482 A2 : 1.21 A3 : 0.79 A4 : 2.05	4.0	1.00
Objective Question				
2	2	A 10 V power supply would use _____ as a filter capacitor. A1 : paper capacitor A2 : mica capacitor A3 : electrolytic capacitor A4 : air capacitor	4.0	1.00
Objective Question				
3	3	The primary function of filter is to _____ . A1 : Minimize AC input variations A2 : Suppress old harmonics in the rectifier output A3 : Stabilize DC level of the output voltage A4 : Remove ripples from the rectifier output	4.0	1.00
Objective Question				
4	4	The maximum possible collector circuit efficiency of an ideal Class A power amplifier is _____. A1 : 15%	4.0	1.00

		A2 : 25% A3 : 50% A4 : 75%		
Objective Question				
5	5	The type of amplifier which exhibits cross over distortion in its output is A1 : Class A A2 : Class B A3 : Class AB A4 : Class C	4.0	1.00
Objective Question				
6	6	The large signal bandwidth of an op-amp is limited by its: A1 : Loop gain A2 : Slew rate A3 : Output impedance A4 : Input frequency	4.0	1.00
Objective Question				
7	7	In the common mode, _____ A1 : both inputs grounded A2 : The outputs are grounded A3 : an identical signal appears on both inputs A4 : the output signals are in phase	4.0	1.00
Objective Question				
8	8	The ‘Q’ of a tuned circuits refers to the property of _____ A1 Fidelity	4.0	1.00

		: A2 : Sensitivity A3 : Selectivity A4 : Quality factor		
Objective Question				
9	9	Demultiplexers facilitate which type of conversion_____ A1 : Decimal to hexadecimal A2 : Single input, multiple outputs A3 : AC to DC A4 : Odd parity to even parity	4.0	1.00
Objective Question				
10	10	How many AND gates are required for a 1 to 8 multiplexer A1 : 2 A2 : 6 A3 : 8 A4 : 5	4.0	1.00
Objective Question				
11	11	How many coulombs of charge flow through a circuit carrying a current of 10 A in 1 minute? A1 : 10 A2 : 60 A3 : 600 A4 : 1200	4.0	1.00
Objective Question				
12	12	A capacitor carries a charge of 0.1 C at 5V. Its capacitance	4.0	1.00

		A1 : 0.02 F A2 : 0.5 F A3 : 0.05 F A4 : 0.2 F		
Objective Question				
13	13	Instantaneous power in inductor is proportional to the A1 : product of the instantaneous current and rate of change of current A2 : square of instantaneous current A3 : square of rate of change of current A4 : temperature of the indicator	4.0	1.00
Objective Question				
14	14	Magnetic flux has the unit of A1 : Newton A2 : Ampere turn A3 : Weber A4 : Tesla	4.0	1.00
Objective Question				
15	15	In balanced bridge, if the positions of the detector and source are interchanged, the bridge will still remain balanced. This can be explained from which theorem A1 : Reciprocity Theorem A2 : Thevenin’s theorem A3 : Norton’s theorem A4 : Compensation theorem	4.0	1.00

Objective Question				
16	16	A box which tells the effect of inputs on control subsystem is known as A1 : Data Box A2 : Logical Box A3 : Decision Box A4 : State Box	4.0	1.00
Objective Question				
17	17	Electrical analogous quantity for spring element K in force voltage analogy is A1 : L A2 : R A3 : 1/C A4 : C	4.0	1.00
Objective Question				
18	18	Differentiation of parabolic response is _____ response. A1 : Parabolic A2 : Ramp A3 : Step A4 : Impulse	4.0	1.00
Objective Question				
19	19	The system function N(s) = V(s)/I(s) = (s+3)/(4s+5). The system is initially at rest. If the excitation i(t) is a unit step, which of the following is the final value? A1 : 1/4 A2 : 3/5 A3 : 1	4.0	1.00

		A4 : 0		
Objective Question				
20	20	Given a unity feedback system with G(s) = k/s(s+4) , the value of K for damping ratio of 0.5 is A1 : 1 A2 : 4 A3 : 16 A4 : 24	4.0	1.00
Objective Question				
21	21	A system is said to be stable if the bounded input to the system produces A1 : Bounded output A2 : Non-bounded output A3 : Inbound output A4 : Outbound output	4.0	1.00
Objective Question				
22	22	A system is said to be casual if the output of the system depend on the A1 : Past and present inputs A2 : Present input A3 : Past input A4 : Past and Future inputs	4.0	1.00
Objective Question				
23	23	Find the Nyquist frequency for the given signal $x(t)= 3\cos 50\pi t + 10\sin 300\pi t - \cos 100\pi t$ A1 : 50Hz A2 : 100 Hz	4.0	1.00

		A3 : 200 Hz A4 : 300 Hz		
Objective Question				
24	24	Telegraph signals are examples of A1 : Digital signal A2 : Analog signal A3 : Impulse signal A4 : Pulse train	4.0	1.00
Objective Question				
25	25	The computation procedure for Decimation in Frequency algorithm takes A1 : Log_2N stages A2 : $2log_2N$ stages A3 : Log_2 N2 stages A4 : Log2N stages	4.0	1.00
Objective Question				
26	26	The region of convergence of $x/(1+2x+x_2)$ is A1 : 0 A2 : 1 A3 : Positive A4 : Negative	4.0	1.00
Objective Question				
27	27	Decimation is a process in which the sampling rate is A1 : Enhanced	4.0	1.00

		A2 : Reduced A3 : Stable A4 : Unpredictable		
Objective Question				
28	28	In a digital representation of voltages using an 8-bit binary code ,how many values can be defined A1 : 8 A2 : 16 A3 : 128 A4 : 256	4.0	1.00
Objective Question				
29	29	Gradient magnitude of images is useful for A1 : Line detection A2 : Point detection A3 : Edge detection A4 : Area detection	4.0	1.00
Objective Question				
30	30	Mean filters reduce noise using A1 : Sharpening A2 : Blurring A3 : Restoration A4 : Acquisition	4.0	1.00
Objective Question				
31	31	What is the modulation index for a single tone modulation, given that positive peak of AM wave is 20V and minimum value is 2V?	4.0	1.00

		A1 : 0.81 A2 : 0.91 A3 : 0.73 A4 : 1		
Objective Question				
32	32	A buffer amplifier is a _____. A1 : Double tuned amplifier A2 : Tuned amplifier A3 : High gain DC amplifier A4 : Low gain DC amplifier	4.0	1.00
Objective Question				
33	33	If a receiver has poor selectivity then it also have poor _____ A1 : Sensitivity A2 : Blocking of unwanted signals A3 : Double spotting A4 : Reception	4.0	1.00
Objective Question				
34	34	Notch is a _____ A1 : High pass filter A2 : Low pass filter A3 : Band stop filter A4 : Band pass filter	4.0	1.00
Objective Question				

35	35	Relationship between amplitude and frequency is represented by _____ A1 : Time domain plot A2 : Phase domain plot A3 : Frequency domain plot A4 : Amplitude domain plot	4.0	1.00
Objective Question				
36	36	If we correlate the received signal with any one of the orthogonal function ,the obtained inner product will be A1 : In phase A2 : Quadrature A3 : Zero A4 : One	4.0	1.00
Objective Question				
37	37	Amplitude distortion occurs when A1 : Impulse response is not constant A2 : Impulse response is constant A3 : Frequency transfer function is constant A4 : Frequency transfer function is not constant	4.0	1.00
Objective Question				
38	38	Biorthogonal codes needs _____ bandwidth as orthogonal codes. A1 : Equal A2 : Double A3 : Half A4 : Triple	4.0	1.00

Objective Question				
39	39	The capacity per cell is _____ E_b/N_o. A1 : Directly proportional A2 : Inversely proportional A3 : Half the A4 : Double the	4.0	1.00
Objective Question				
40	40	Linear codes are used for _____. A1 : Forward error correction A2 : Backward error correction A3 : Forward error detection A4 : Backward error detection	4.0	1.00
Objective Question				
41	41	The scalar factor of spherical coordinate are _____ A1 : 1,r,rsin θ A2 : r ,1,r A3 : r,r,1 A4 : 1,r,r	4.0	1.00
Objective Question				
42	42	Transform the vector (4,-2,-4) at (1,2,3) into spherical coordinates. A1 : 3.197i-2.293j+4.4.72k A2 : -3.197i+2.293j-4.4.72k A3 : 3.197i+2.293j+4.4.72k	4.0	1.00

		A4 : -3.197i-2.293j-4.4.72k		
Objective Question				
43	43	The open wire transmission line consists of A1 : Conductor A2 : Dielectric A3 : Both conductor and dielectric A4 : Either conductor or dielectric	4.0	1.00
Objective Question				
44	44	The range of frequencies operated by the coaxial cables is in A1 : Hz A2 : kHz A3 : MHz A4 : GHz	4.0	1.00
Objective Question				
45	45	The cut of frequency for waveguide operation is A1 : 2 MHz A2 : 6 GHz A3 : 4 MHz A4 : 6 MHz	4.0	1.00
Objective Question				
46	46	A rectangular horn antenna operating at 4 GHz has the wavelength of 0.075m and gain of about 13 dBi .What will be its required capture area? A1 : 0.0149 m^2 A2 : 0.0475 m^2	4.0	1.00

		A3 : 0.5521 m^2 A4 : 0.9732 m^2		
Objective Question				
47	47	A dipole carries r.m.s current of about 300A across the radiation resistance 2Ω.What would be the power radiated by an antenna? A1 : 90 kW A2 : 135 kW A3 : 180 kW A4 : 200 Kw	4.0	1.00
Objective Question				
48	48	If the maximum electron density for F-layer in ionosphere is 4 x 106 electrons/cm^3, then what will be the critical frequency of EM wave for F-layer? A1 : 4 MHz A2 : 9 MHz A3 : 18 MHz A4 : 25 MHz	4.0	1.00
Objective Question				
49	49	If the elements of a binomial array are separated by λ/4, how many shape patterns are generated with no minor lobes? A1 : 2 A2 : 4 A3 : 8 A4 : 16	4.0	1.00
Objective Question				
50	50	Which waveform plays a crucial role in determining the radiation pattern of the dipole/wire antennas? A1 Current	4.0	1.00

		: A2 : Voltage A3 : Frequency A4 : Phase		
Objective Question				
51	51	In DAC gain error occurs due to A1 : Offset voltages of op-amp A2 : Leakage current in the switches A3 : Error in feedback resistor value A4 : Error in current source resistance value	4.0	1.00
Objective Question				
52	52	In a peak detector circuit, which component holds the peak value till a higher peak value is detected? A1 : Diode A2 : Inductor A3 : Capacitor A4 : Resistor	4.0	1.00
Objective Question				
53	53	Due to the presence of a capacitor in the feedback path ,the output of an integrator varies A1 : Gradually A2 : Instantaneously A3 : Intermittently A4 : Abruptly	4.0	1.00
Objective Question				
54	54	Which among the following has a constant power spectral density over a wide frequency range?	4.0	1.00

		A1 : White noise A2 : Gaussian noise A3 : Speckle noise A4 : Rayleigh noise		
Objective Question				
55	55	Which is used to store critical pieces of data during subroutines and interrupts A1 : Stack A2 : Queue A3 : Accumulator A4 : Data register	4.0	1.00
Objective Question				
56	56	The RAM which is created by Bipolar Transistors is called A1 : Dynamic RAM A2 : Static RAM A3 : Permanent RAM A4 : DDR RAM	4.0	1.00
Objective Question				
57	57	A microprocessor retires instructions from A1 : Control Memory A2 : Cache Memory A3 : Main Memory A4 : Virtual Memory	4.0	1.00

Objective Question				
58	58	_____ is the most important segment and it contains the actual assembly language instruction to be executed by the microprocessor. A1 : Data Segment A2 : Code Segment A3 : Stack segment A4 : Extra segment	4.0	1.00
Objective Question				
59	59	Which of the following are the two main components of the CPU? A1 : Control unit and Registers A2 : Registers and Main memory A3 : Control unit and ALU A4 : ALU and Bus	4.0	1.00
Objective Question				
60	60	_____a subsystem that transfer the data between computer components inside a computer or between computers. A1 : Chip A2 : Register A3 : Processor A4 : Bus	4.0	1.00
Objective Question				
61	61	A mathematical model is very often an equation containing derivatives of an unknown function, such a model is called A1 : Difference equation A2 : Differential equation A3 : Integral equation	4.0	1.00

		A4 : Algebraic equation		
Objective Question				
62	62	Transpose of a column matrix is _____. A1 : Zero matrix A2 : Diagonal matrix A3 : Column matrix A4 : Row matrix	4.0	1.00
Objective Question				
63	63	If A is a symmetric matrix, then $A^T$is _____. A1 : A A2 : |A| A3 : 0 A4 : Diagonal matrix	4.0	1.00
Objective Question				
64	64	Solution of a quadratic equation $X^2+5X-6 = 0$ A1 : X= -1,X=6 A2 : X= 1,X= -6 A3 : X=1 A4 : X=6	4.0	1.00
Objective Question				
65	65	Every even integer is also a A1 : Natural number A2 : Rational number A3 Irrational number	4.0	1.00

		: A4 : Whole number		
Objective Question				

66	66	What is the output of the following program?
		
		#include<stdio.h>
		main()
		{
		int a[ ] = {1,2}, *p = a;
		printf("%d", p[1]);
		}
		
		A1 : 1
		
		A2 : 2
		
		A3 : 1,2
		
		A4 : A
			4.0	1.00

Objective Question				
67	67	The binary equivalent of 50 is _____. A1 : 110010 A2 : 010101 A3 : 101101 A4 : 111010	4.0	1.00
Objective Question				

68	68	What is the output of the program?
		#include <stdio.h>
		int main()
		{
		int var = 010;
		printf("%d", var);
		}
		
		A1 : 10
		
		A2 : 0
		
		A3 : 8
			4.0	1.00

		A4 : 01		
Objective Question				
69	69	_____ occurs when a result is too large in magnitude to represent errors as a floating-point value of the required type. A1 : Underflow A2 : Significant loss A3 : Overflow A4 : Domain	4.0	1.00
Objective Question				
70	70	What is the return-type of the function sqrt()? A1 : Int A2 : Float A3 : Double A4 : Data type	4.0	1.00
Objective Question				
71	71	The modes of propagation supported by a rectangular wave guide is? A1 : TM, TEM, TE modes A2 : TM, TE modes A3 : TM, TEM modes A4 : TE, TEM modes	4.0	1.00
Objective Question				
72	72	For $TE1_0$ mode, if the waveguide is filled with air and the broader dimension of the waveguide is 2 cm, then the cutoff frequency is: A1 : 5 MHz A2 : 7.5 MHz	4.0	1.00

		A3 : 7.5 GHz A4 : 5 GHz		
Objective Question				
73	73	For dominant mode propagation in TE mode, if the rectangular waveguide has a broader dimension of 31.14 mm , then the cutoff wave number A1 : 100 A2 : 500 A3 : 50 A4 : 1000	4.0	1.00
Objective Question				
74	74	In TM mode, if the direction of wave propagation is in ‘z’ direction, then: A1 : $H_Z=0$ A2 : $E_Z=0$ A3 : $E_Y=0$ A4 : $H_Y=0$	4.0	1.00
Objective Question				
75	75	_____ is defined as the ratio of desired signal power to undesired noise power. A1 : Signal to noise ratio A2 : Noise to signal ratio A3 : Noise figure A4 : Noise temperature	4.0	1.00
Objective Question				
76	76	What is the typical value of refractive index for an ethyl alcohol? A1 : 1	4.0	1.00

		A2 : 1.36 A3 : 2.6 A4 : 3.4		
Objective Question				
77	77	In an optical fiber, the concept of Numerical aperture is applicable in describing the ability of _____ A1 : Light Collection A2 : Light Scattering A3 : Light Dispersion A4 : Light Polarization	4.0	1.00
Objective Question				
78	78	Which among the following is regarded as an inelastic scattering of a photon? A1 : Kerr Effect A2 : Raman Effect A3 : Hall Effect A4 : Miller Effect	4.0	1.00
Objective Question				
79	79	For a photo-diode with responsivity of 0.50 A/W & optical power of about 12μW, what would be the value of generated photocurrent? A1 : 3 μA A2 : 6 μA A3 : 9 μA A4 : 12 μA	4.0	1.00
Objective Question				
80	80	In digital receivers, which codes are used to designate the sampled analog signals after their quantization into discrete levels?	4.0	1.00

		A1 : Binary A2 : Decimal A3 : ASCII A4 : Excess-3		
Objective Question				
81	81	The area of coverage of a satellite radio beam is called its A1 : Beam Width A2 : Circular Polarization A3 : Footprint A4 : Identity	4.0	1.00
Objective Question				
82	82	In a synchronous modem, the digital-to-analog converter sends a signal to the A1 : Transmission Line A2 : Modulator A3 : Terminal A4 : Equalizer	4.0	1.00
Objective Question				
83	83	The loss in signal power as light travels down the fiber is called A1 : Propagation A2 : Attenuation A3 : Scattering A4 : Absorption	4.0	1.00

Objective Question				
84	84	Lack of access control policy is a _____. A1: Bug A2: Threat A3: Vulnerability A4: Attack	4.0	1.00
Objective Question				
85	85	According to the CIA Triad, which of the below-mentioned element is not considered in the triad? A1: Confidentiality A2: Integrity A3: Authenticity A4: Availability	4.0	1.00
Objective Question				
86	86	When integrity is lacking in a security system, _____ occurs. A1: Database hacking A2: Data deletion A3: Data tampering A4: Data leakage	4.0	1.00
Objective Question				
87	87	_____ is the latest technology that faces an extra challenge because of CIA paradigm. A1: Big data A2: Database systems A3: Cloud storages A4 Smart dust	4.0	1.00

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Objective Question				
88	88	Which of the following is not a type of virus? A1 : Boot sector A2 : Polymorphic A3 : Multipartite A4 : Trojans	4.0	1.00
Objective Question				
89	89	A firewall protects which of the following attacks? A1 : Phishing A2 : Dumpster diving A3 : Denial of Service A4 : Shoulder surfing	4.0	1.00
Objective Question				
90	90	In _____ layer, vulnerabilities are directly associated with physical access to networks and hardware. A1 : Physical A2 : Data-Link A3 : Network A4 : Application	4.0	1.00
Objective Question				
91	91	What band VSAT Operate? A1 : Ku band A2 : Ka band A3 : K band	4.0	1.00

		A4 : C band		
Objective Question				
92	92	Repeaters inside the communication satellites are known as A1 : Transceivers A2 : Transponders A3 : Transducers A4 : Travelling Wave Tube	4.0	1.00
Objective Question				
93	93	What is the delay time for the satellite transmissions for earth transmitter to earth receiver? A1 : 0.5 s A2 : 1.0 s A3 : 5 ms A4 : 0.5 ms	4.0	1.00
Objective Question				
94	94	Actual radio coverage of the cell is termed as A1 : Imprint A2 : Fingerprint A3 : Footprint A4 : Hexagonprint	4.0	1.00
Objective Question				
95	95	The time over which a call can be maintained within a cell without handoff is called _____. A1 : Run time A2 : Peak time	4.0	1.00

		A3 : Dwell time A4 : Cell time		
Objective Question				
96	96	What does the number 2000 in IMT-2000 signifies? A1 : Year A2 : Number of subscribers per cell A3 : Number of cells A4 : Area	4.0	1.00
Objective Question				
97	97	If peak transmitted power in a radar system is increased 16 times, its maximum range will be increased by a factor of A1 : 2 A2 : 4 A3 : 8 A4 : 16	4.0	1.00
Objective Question				
98	98	If the transmitted waveform is a train of rectangular pulses of width 2 microseconds, the pulse repetition period is 1 millisecond and the peak power is 10 kilowatts, the average power is A1 : 2 A2 : 20 A3 : 200 A4 : 2000	4.0	1.00
Objective Question				
99	99	The best system for tracking a target after it has been acquired is A1 : Helical	4.0	1.00

		A2 : Nodding A3 : Conical A4 : Monopulse		
Objective Question				
100	100	A CW-FM radar can measure A1 : Only relative velocity A2 : Only range A3 : Relative velocity and range A4 : Relative velocity,range and size of target	4.0	1.00