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Roll No

NOIDA INSTITUTE OF ENGINEERING AND TECHNOLOGY, GREATER NOIDA

(An Autonomous Institute)

Affiliated to Dr. A.P.J. Abdul Kalam Technical University, Uttar Pradesh, Lucknow

B.Tech

FIRST YEAR (SEMESTER-II) THEORY EXAMINATION (2020-2021)

(Objective Type)

Subject Code: AEC0201

Subject: Basic Electrical and Electronics Engineering

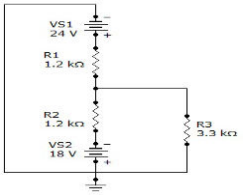
Max. Mks. : 70

Time : 70 Minutes

General Instructions:

All questions are compulsory.

Question No- 1 to 35 are objective type question carrying 2 marks each.

Q.No	Question Content	Question Image	Category	Sub Category	Marks	Options Randomization	Type	Difficulty	Correct	Option1	Option2	Option3	Option4
1	Consider a circuit with two unequal resistances in parallel, then _____,		Attempt all the questions	15 x 2=30	2		Single Choice	Smart	potential difference across each is same	large current flows in large resistor	current is same in both	potential difference across each is same	smaller resistance has smaller conductance
2	Which of the following theorems is applicable for both linear and nonlinear circuits?		Attempt all the questions	15 x 2=30	2		Single Choice	Brilliant	None of these	Superposition	Thevenin's	Norton's	None of these
3	Find the total current through R3 in the given circuit.		Attempt all the questions	15 x 2=30	2		Single Choice	Brilliant	1.8 mA	7.3 mA	5.5 mA	12.8 mA	1.8 mA
4	A sinusoidal voltage has peak to peak value of 100 V. The rms value is ___ V.		Attempt all the questions	15 x 2=30	2		Single Choice	Smart	35.35	50	70.7	35.35	141.41
5	Impedance of an AC circuit is 10∠60o Ω,then resistance in the circuit is __ Ω.		Attempt all the questions	15 x 2=30	2		Single Choice	Brilliant	5	5	8.66	10	none of above
6	To transmit the same amount of power over fixed distance, three-phase circuit needs ____ weight of copper as compared to single-phase circuit.		Attempt all the questions	15 x 2=30	2		Single Choice	Genius	3/4 times	3 times	3/4 times	2 times	0.5 times
7	How to reduce hysteresis loss in transformer?		Attempt all the questions	15 x 2=30	2		Single Choice	Smart	By using soft magnetic material	By using thin laminated strips	By using soft magnetic material	By using hard magnetic material	By using solid piece of magnetic material
8	A 1000/100 V Transformer is supplied by 220 V ,50 Hz AC. Output frequency will be ____.		Attempt all the questions	15 x 2=30	2		Single Choice	Genius	50 Hz	0.5 Hz	0.005 Hz	500 Hz	50 Hz
9	Which of the following is cheapest protection element used in electrical system?		Attempt all the questions	15 x 2=30	2		Single Choice	Brilliant	Fuse	Isolator	Fuse	Relay	Circuit Breaker
10	n-type and p-type semiconductor formed by doping of _____ impurity		Attempt all the questions	15 x 2=30	2		Single Choice	Smart	Pentavalent	Trivalent	Pentavalent	Trivalent and Pentavalent	None of these
11	Peak inverse voltage of center tapped full wave rectifier is _____.		Attempt all the questions	15 x 2=30	2		Single Choice	Smart	2Vm	2Vm	Vm	Vm/2	None of these

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12	The LCD digital display that is based on _____.		Attempt all the questions	15 x 2=30	2		Single Choice	Brilliant	Reflection of light	Radiation of light	Reflection of light	Emission of light	Transmission of light
13	The differentiator output Vo= ____ for a pure DC input.		Attempt all the questions	15 x 2=30	2		Single Choice	Brilliant	Zero	Ramp	Zero	Unpredictable	None of these
14	The input offset current is defined as _____.		Attempt all the questions	15 x 2=30	2		Single Choice	Smart	IB1 - IB2	IB1 + IB2	IB1 - IB2	IB1 x IB2	None of these
15	Which of the following is the way in which an IoT device is associated with data?		Attempt all the questions	15 x 2=30	2		Single Choice	Smart	Cloud	Internet	Cloud	Automata	Network
16	Ideally the efficiency should be_____%		Attempt All Questions	4 X 2 = 8	2		Single Choice	Brilliant	100	VA	0	100	iron
17	The _____ loss remains constant, independent of load.		Attempt All Questions	4 X 2 = 8	2		Single Choice	Brilliant	iron	VA	0	100	iron
18	Ideally the regulation should be _____ %		Attempt All Questions	4 X 2 = 8	2		Single Choice	Brilliant	0	VA	0	100	iron
19	A transformer power rating is always in terms of _____.		Attempt All Questions	4 X 2 = 8	2		Single Choice	Brilliant	VA	VA	0	100	iron
20	The _____ elements supply electrical energy to the network.		Attempt All Questions	4 X 2 = 8	2		Single Choice	Brilliant	Active	Bilateral	Active	Unilateral	Linear
21	The _____ elements always follow ohm's law.		Attempt All Questions	4 X 2 = 8	2		Single Choice	Brilliant	Linear	Bilateral	Active	Unilateral	Linear
22	Resistor, inductor and capacitor are _____ elements.		Attempt All Questions	4 X 2 = 8	2		Single Choice	Brilliant	Bilateral	Bilateral	Active	Unilateral	Linear
23	The _____ elements conducts in one direction only.		Attempt All Questions	4 X 2 = 8	2		Single Choice	Brilliant	Unilateral	Bilateral	Active	Unilateral	Linear
24	Form factor for a sine wave is _____.		Attempt All Questions	4 X 2 = 8	2		Single Choice	Smart	1.11	L or C	RMS	1.11	resistance
25	In R-L-C series resonant circuit magnitude of resonance frequency can be changed by changing the value of _____.		Attempt All Questions	4 X 2 = 8	2		Single Choice	Smart	L or C	L or C	RMS	1.11	resistance
26	In an A.C. circuit power is dissipated in _____.		Attempt All Questions	4 X 2 = 8	2		Single Choice	Smart	resistance	L or C	RMS	1.11	resistance
27	The voltage of domestic supply is 220 V. This figure represents _____.		Attempt All Questions	4 X 2 = 8	2		Single Choice	Smart	RMS	L or C	RMS	1.11	resistance
28	Intrinsic semiconductors are doped with _____ Impurity for making n-type semiconductor		Attempt All Questions	4 X 2 = 8	2		Single Choice	Brilliant	pentavalent	trivalent	pentavalent	absolute zero	20oC
29	At temperature close to _____ the conduction begins in semiconductors.		Attempt All Questions	4 X 2 = 8	2		Single Choice	Brilliant	20oC	trivalent	pentavalent	absolute zero	20oC
30	Intrinsic semiconductors are doped with _____ Impurity for making p-type semiconductor		Attempt All Questions	4 X 2 = 8	2		Single Choice	Brilliant	trivalent	trivalent	pentavalent	absolute zero	20OC
31	The intrinsic semiconductor acts like insulator at the _____ temperature.		Attempt All Questions	4 X 2 = 8	2		Single Choice	Brilliant	absolute zero	trivalent	pentavalent	absolute zero	20oC
32	For an ideal OP-AMP, voltage gain is _____.		Attempt All Questions	4 X 2 = 8	2		Single Choice	Smart					
33	For an inverting Amplifier, voltage gain is _____.		Attempt All Questions	4 X 2 = 8	2		Single Choice	Smart					
34	For a Voltage Follower, voltage gain is _____.		Attempt All Questions	4 X 2 = 8	2		Single Choice	Smart					

Q.No	Question Content	Question Image	Category	Sub Category	Marks	Options Randomization	Type	Difficulty	Correct	Option1	Option2	Option3	Option4
35	For a non-inverting Amplifier, voltage gain is _____.		Attempt All Questions	4 X 2 = 8	2		Single Choice	Smart					