

PREVIEW QUESTION BANK

Module Name : SCPH09 Electronics and Communication Engg - Electronic Science - ENG
 Exam Date : 27-Oct-2023 Batch : 14:30-17:30

Sr. No.	Client Question ID	Question Body and Alternatives	Marks	Negativ Marks
Objective Question				
1	975001	Step function is a 1. first time derivative of ramp function 2. first time derivative of impulse function 3. first time integral of ramp function 4. first time integral of impulse function A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	0.00
Objective Question				
2	975002	The open loop transfer function of a unity feedback control system is given by $G(s) = \frac{25}{s(s+5)}$ Damping ratio for a unit step input given to this control system will be 1. 2 2. 1/2 3. 1/4 4. 1/5 A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	0.00
Objective Question				
3	975003	A measure of reflecting the average number of citations to recent articles published in the journal is known as 1. Impact factor 2. h index 3. i-10 index 4. SCI index A1 : 1 A2 : 2 A3 : 3	4.0	0.00

		A4 : 4		
Objective Question				
4	975004	Reasoning from general to particular is called 1. Induction 2. Deduction 3. Observation 4. Experience A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	0.00
Objective Question				
5	975005	A scholar has index h if 1. h of his /her N papers have at least h citations each , and the other N –h papers have more than h citations each 2. h of his /her N papers have at the maximum h citations each , and the other N –h papers have no more than h citations each 3. h of his /her N papers have at least h citations each , and the other N –h papers have no more than h citations each 4. h of his /her N papers have at the maximum h citations each , and the other N –h papers have more than h citations each A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	0.00
Objective Question				
6	975006	DOI of an article is 1. Digital object identifier 2. Data object identifier 3. Digital object index 4. Data object index A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	0.00
Objective Question				
7	975007		4.0	0.00

		Regression is 1. the determination of a statistical relationship between two or more variables 2. the measure of flat-toppedness of a curve 3. the average of difference of the values of items from some average of the series 4. defined as the difference between the values of the extreme items of a series A1 : 1 A2 : 2 A3 : 3 A4 : 4		
--	--	--	--	--

Objective Question

8	975008	Which amongst the following is a measure of dispersion 1. Cross tabulation 2. Range 3. Spearman's coefficient of correlation 4. Mode A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	0.00
---	--------	--	-----	------

Objective Question

9	975009	If the population from which a sample is to be drawn does not constitute a homogeneous group, then following sampling is used 1. random sampling 2. stratified sampling 3. sequential sampling 4. deliberate sampling A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	0.00
---	--------	---	-----	------

Objective Question

10	975010	Which of the following is not a measure of central tendency 1. Mean 2. Median 3. Mode 4. Standard deviation	4.0	0.00
----	--------	---	-----	------

		A1 : 1		
		A2 : 2		
		A3 : 3		
		A4 : 4		

Objective Question

11	975011	“Empirically verifiable observation” is 1. Fact 2. Statement 3. Theory 4. Value A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	0.00
----	--------	---	-----	------

Objective Question

12	975012	Hypothesis is 1. tentative assumption made in order to draw out and test its logical or empirical consequences 2. finding of a research 3. literature review in a research 4. research gap in a research A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	0.00
----	--------	--	-----	------

Objective Question

13	975013	The basic principle of _____ is to test for differences among the means of the populations by examining the amount of variation within each of these samples, relative to the amount of variation between the samples. 1. chi square 2. t- test 3. z-test 4. ANOVA A1 : 1 A2 : 2	4.0	0.00
----	--------	--	-----	------

		A3 : 3		
		A4 : 4		

Objective Question

14	975014	Which amongst the following is an incorrect statement? 1. Alternative hypothesis is usually the one which one wishes to prove and the null hypothesis is the one which one wishes to disprove. 2. If the rejection of a certain hypothesis when it is actually true involves great risk, it is taken as null hypothesis 3. An alternative hypothesis represents the hypothesis we are trying to reject, and null hypothesis represents all other possibilities 4. Null hypothesis should always be specific hypothesis i.e., it should not state about or approximately a certain value A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	0.00
----	--------	---	-----	------

Objective Question

15	975015	Type II error means 1. rejection of hypothesis which should have been accepted 2. accepting the null hypothesis 3. accepting the hypothesis which should have been rejected 4. rejection of the null hypothesis A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	0.00
----	--------	---	-----	------

Objective Question

16	975016	et al. in a research paper means 1. etc. 2. citation index 3. and others 4. h index A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	0.00
----	--------	---	-----	------

Objective Question

17	975017	Which amongst the following is an authentic software used for checking the plagiarism in a manuscript? 1. Matlab 2. Turnitin 3. Grammarly 4. Bolt A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	0.00
----	--------	---	-----	------

Objective Question

18	975018	Measures of central tendency 1. tell us the point about which items have a tendency to cluster 2. is a measure of asymmetry and shows the manner in which the items are clustered 3. is a mere assumption or some supposition to be proved or disproved 4. is based on an important property of F-ratio that its value does not change if all the n item values are either multiplied or divided by a common figure or if a common figure is either added or subtracted from each of the given n item values A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	0.00
----	--------	--	-----	------

Objective Question

19	975019	Extraneous variable is 1. variable that depends upon or is a consequence of the other variable 2. variable that is antecedent to the dependent variable 3. an independent variable that is not related to the purpose of the study, but may affect the dependent variable 4. variable that is antecedent to the independent variable A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	0.00
----	--------	--	-----	------

Objective Question

20	975020		4.0	0.00
----	--------	--	-----	------

		Skewness 1. is a measure of symmetry and shows the manner in which the items are clustered 2. is a measure of asymmetry and shows the manner in which the items are clustered 3. is the value of the middle item of series when it is arranged in ascending or descending order of magnitude 4. is the average of difference of the values of items from some average of the series A1 : 1 A2 : 2 A3 : 3 A4 : 4		
--	--	---	--	--

Objective Question

21	975021	Convert 0.625 into its equivalent binary fraction 1. 0.001 2. 0.011 3. 0.110 4. 0.101 A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	0.00
----	--------	---	-----	------

Objective Question

22	975022	Which amongst the following is not a method of factor analysis ? 1. the principal components method 2. central tendency method 3. the maximum likelihood method 4. the centroid method A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	0.00
----	--------	--	-----	------

Objective Question

23	975023	Who should write the literature review? 1. Supervisor 2. Scholar 3. Friends 4. University	4.0	0.00
----	--------	---	-----	------

		A1 : 1		
		A2 : 2		
		A3 : 3		
		A4 : 4		

Objective Question

24	975024	Statistical analysis done to compare means between two groups is known as	4.0	0.00
		1. z test 2. t-test 3. chi square test 4. regression analysis		
		A1 : 1		
		A2 : 2		
		A3 : 3		
		A4 : 4		

Objective Question

25	975025	Using someone's work without giving them due credit is known as	4.0	0.00
		1. Falsification 2. Fabrication 3. Publication 4. Plagiarism		
		A1 : 1		
		A2 : 2		
		A3 : 3		
		A4 : 4		

Objective Question

26	975026	What do you understand by bias in research methodology?	4.0	0.00
		1. Systematic errors in data collection 2. Measure of central tendency 3. Measure of dispersion 4. Skewness		
		A1 : 1		
		A2 : 2		
		A3 : 3		
		A4 : 4		

Objective Question

27	975027	The purpose of statistical analysis is 1. To draw conclusion from research data 2. To find the research gaps 3. To identify problem statement 4. To do literature review A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	0.00
----	--------	--	-----	------

Objective Question

28	975028	The purpose of a control group in an experiment is 1. To control dependent variables 2. To control independent variables 3. To find measures of central tendency 4. to provide baseline for comparison A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	0.00
----	--------	--	-----	------

Objective Question

29	975029	Which amongst the following is a primary source of data? 1. research publications 2. ebooks 3. Interview transcript 4. textbook A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	0.00
----	--------	---	-----	------

Objective Question

30	975030		4.0	0.00
----	--------	--	-----	------

		In a critically damped system 1. Oscillations increase 2. No oscillations are observed 3. Oscillations decrease 4. Oscillations suddenly appear A1 : 1 A2 : 2 A3 : 3 A4 : 4		
--	--	---	--	--

Objective Question

31	975031	The maximum overshoot can be decreased by using 1. Gain adjustment 2. Proportional error control 3. Derivative error controller 4. PI controller A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	0.00
----	--------	--	-----	------

Objective Question

32	975032	Damping ratio for $M_p=100\%$ is 1. 0 2. infinite 3. 1 4. 100 A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	0.00
----	--------	--	-----	------

Objective Question

33	975033	The stability of a system 1. increases as the type of system increases 2. decreases as the type of system decreases 3. remains constant with the change in the type of system 4. decreases as the type of system increases A1 : 1	4.0	0.00
----	--------	--	-----	------

		A2 : 2		
		A3 : 3		
		A4 : 4		

Objective Question

34	975034	RH criterion gives 1. Gain margin 2. absolute stability 3. relative stability 4. marginal stability A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	0.00
----	--------	---	-----	------

Objective Question

35	975035	A second order system having damping ratio less than 0 is always 1. critically stable 2. unstable 3. marginally stable 4. stable A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	0.00
----	--------	--	-----	------

Objective Question

36	975036	If there are closed loop conjugate pair of pole on jw axis, the system is 1. unstable 2. stable 3. marginally stable 4. such that the stability can not be found A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	0.00
----	--------	--	-----	------

Objective Question				
37	975037	Integral error control 1. increase the steady state errors in the system 2. decrease the order of the system 3. does not affect the order of the system 4. increase the order of the system A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	0.00
Objective Question				
38	975038	The frequency at which the magnitude of the Bode plot crosses the 0 db axis is 1. phase crossover frequency 2. natural frequency 3. gain crossover frequency 4. corner frequency A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	0.00
Objective Question				
39	975039	The point at which the root locus separates between two open loop poles is known as 1. breakaway point 2. critical point 3. separation point 4. crossover point A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	0.00
Objective Question				
40	975040	The purpose of research hypothesis is 1. To do literature review 2. To find clear research objective 3. To draw conclusions from previous findings 4. To write a research paper	4.0	0.00

		A1 : 1		
		A2 : 2		
		A3 : 3		
		A4 : 4		

Objective Question

41	975041	Which amongst the following is not a characteristic of a good research	4.0	0.00
		1. Focused 2. Ambiguous 3. Relevant 4. Significant		
		A1 : 1		
		A2 : 2		
		A3 : 3		
		A4 : 4		

Objective Question

42	975042	Research methodology	4.0	0.00
		1. is a way to systematically solve the research problem 2. may be understood as all those methods/techniques that are used for conducting research 3. consists of those methods which are used to evaluate the accuracy of the results obtained 4. refers to the methods the researchers adopt to carry out their research		
		A1 : 1		
		A2 : 2		
		A3 : 3		
		A4 : 4		

Objective Question

43	975043	Which one is not a quality of a good research	4.0	0.00
		1. Good research is systematic 2. Good research is empirical 3. Good research is replicable 4. Good research is non replicable		
		A1 : 1		
		A2 : 2		
		A3 : 3		
		A4 : 4		

Objective Question

44	975044	Which amongst the following is not a part of research process	4.0	0.00
		1. formulating the research problem 2. generalizations and interpretation 3. Paraphrasing 4. extensive literature survey		
		A1 : 1		
		A2 : 2		
		A3 : 3		
		A4 : 4		

Objective Question

45	975045	Primary data can not be collected	4.0	0.00
		1. by observation 2. by telephonic interview 3. by mailing of questionnaires 4. by random sampling		
		A1 : 1		
		A2 : 2		
		A3 : 3		
		A4 : 4		

Objective Question

46	975046	Taking consent is a part of	4.0	0.00
		1. research ethics 2. research methodology 3. data preprocessing 4. Laboratory test		
		A1 : 1		
		A2 : 2		
		A3 : 3		
		A4 : 4		

Objective Question

47	975047		4.0	0.00

		The section of research article where credit is given to the already published work used in the research article is 1. Abbreviations 2. Template 3. Appendix 4. References A1 : 1 A2 : 2 A3 : 3 A4 : 4		
--	--	--	--	--

Objective Question

48	975048	First step of a research process is 1. Identifying problem statement 2. Literature review 3. To draw conclusion 4. To find experimental results A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	0.00
----	--------	---	-----	------

Objective Question

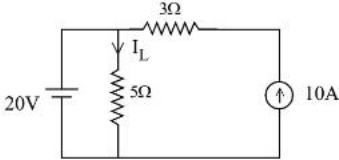
49	975049	Empirical research 1. is related to some abstract idea(s) or theory 2. is based on the measurement of quantity or amount 3. relies on experience or observation alone 4. is concerning some natural phenomenon A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	0.00
----	--------	--	-----	------

Objective Question

50	975050	A research problem 1. refers to a problem which the research is not capable of solving 2. refers to a problem created by various factors during research 3. refers to the personal problems of researchers in doing research 4. refers to some difficulty which a researcher experiences in the context of either a theoretical or practical situation and wants to obtain a solution for the same	4.0	0.00
----	--------	--	-----	------

10/30/23, 10:35 AM	224_SCPH09_E_Live_1-100.html		
		A1 : 1 A2 : 2 A3 : 3 A4 : 4	

Objective Question

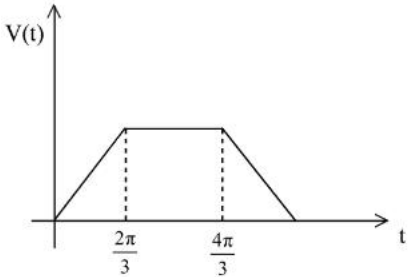
51	975051	The load current (I_L) in the given circuit is _____  1. 10 A 2. 4 A 3. 1.25 A 4. zero A A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	0.00
----	--------	--	-----	------

Objective Question

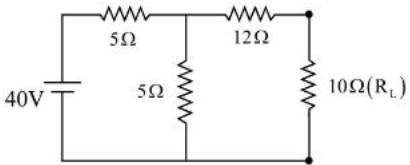
52	975052	The value of unit impulse function $\delta(t)$ for $t > 0$ is _____ 1. Zero 2. k, where k is constant 3. Unity 4. Infinity A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	0.00
----	--------	---	-----	------

Objective Question

53	975053		4.0	0.00
----	--------	--	-----	------

10/30/23, 10:35 AM	224_SCPH09_E_Live_1-100.html			
The average value of a periodic trapezoidal waveform as shown in figure is _____  1. $\frac{1}{3} V_m$ 2. $\frac{8}{3} V_m$ 3. $\frac{2}{3} V_m$ 4. $\frac{2}{3} V_m \pi$ A1 : 1 A2 : 2 A3 : 3 A4 : 4				

Objective Question

54	975054	In the given circuit, find the maximum power transferred to the load resistance (R_L)  1. 4.54W 2. 110.34W 3. 10.00W 4. 6.89W A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	0.00
----	--------	---	-----	------

Objective Question

55	975055		4.0	0.00
----	--------	--	-----	------

The voltage across 2.2 kW toaster that produces a current of 5A is _____

1. 22 kV
2. 44 kV
3. 220 V
4. 440 V

A1 : 1

A2 : 2

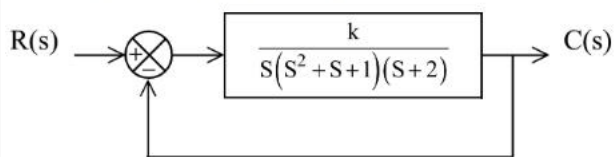
A3 : 3

A4 : 4

Objective Question

56 975056

Following closed loop system is given:



for what positive value of k, the system gives sustained oscillation?

1. $\frac{9}{14}$
2. $\frac{14}{9}$
3. 9
4. 14

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

57 975057

In terms of ABCD parameter, a two port network is symmetrical if and only if _____

1. $A = B$
2. $B = C$
3. $C = D$
4. $D = A$

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

58	975058	If the root locus branches cross the imaginary axis, the system becomes _____ 1. Overdamped 2. Critically damped 3. Unstable 4. Stable A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	0.00
----	--------	--	-----	------

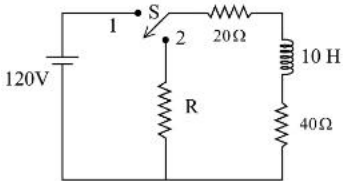
Objective Question

59	975059	The lead compensation network is consider to be _____ 1. High pass filter 2. Low pass filter 3. Equalizer 4. Ripple filter A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	0.00
----	--------	--	-----	------

Objective Question

60	975060	A system is represented by a relation given below: $X(s) = R(s) \frac{100}{s^2 + 2s + 50}$ if $r(t) = 1.0$ unit, find the value of $x(t)$ when $t \rightarrow \infty$ 1. Zero 2. 2.0 unit 3. Infinity 4. 1.0 unit A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	0.00
----	--------	---	-----	------

Objective Question

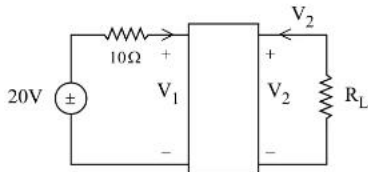
61	975061	A coil of Inductance 10H, resistance 40Ω is connected as shown in figure. After the switch (S) has been connected with point 1 for a very long time, it is moved to point 2 at $t = 0$. If at $t = 0^+$, the voltage across coil is 120 V, the value of resistance R is _____  1. 0Ω 2. 20Ω 3. 40Ω 4. 60Ω A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	0.00
----	--------	---	-----	------

Objective Question

62	975062	The graph associated with an electrical network has 7 branches and 5 nodes. The number of independent KCL equations and the number of independent KVL equations are _____ 1. 2 and 5 2. 5 and 2 3. 3 and 4 4. 4 and 3 A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	0.00
----	--------	--	-----	------

Objective Question

63	975063		4.0	0.00
----	--------	--	-----	------

10/30/23, 10:35 AM		224_SCPH09_E_Live_1-100.html	
		The z-parameter of the two port network shown in figure are $Z_{11} = 40\Omega$, $Z_{12} = 60\Omega$, $Z_{21} = 80\Omega$ and $Z_{22} = 100\Omega$. The average power delivered to $R_L = 20\Omega$, in Watt is _____  1. 26.66W 2. 35.55W 3. 80W 4. 11.25W A1 : 1 A2 : 2 A3 : 3 A4 : 4	
Objective Question			
64	975064	The analysis of multiple input and multiple output system is conveniently studied by_____ 1. State-space approach 2. Root locus approach 3. Characteristic equation approach 4. Nichols Chart A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.00.00
Objective Question			
65	975065	In Z-plane, the unit circle corresponds to_____ 1. Imaginary axis of s-plane 2. + real axis of s-plane 3. - real axis of s-plane 4. Origin of s-plane A1 : 1 A2 : 2 A3 : 3	4.00.00

A4 : 4

Objective Question

66	975066	A bulb in a staircase has two switches, one switch being at the ground floor and other one at at the first floor. The bulb can be turned "ON" and also can be turned "OFF" by any of the switches. The logic of switching of bulb resembles _____ 1. AND gate 2. OR gate 3. XOR gate 4. NAND gate A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	0.00
----	--------	---	-----	------

Objective Question

67	975067	A digital to Analog converter with full scale output voltage of 3.5 V has a resolution close to 14 mV. Its bit size is _____ 1. 4 2. 8 3. 16 4. 32 A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	0.00
----	--------	--	-----	------

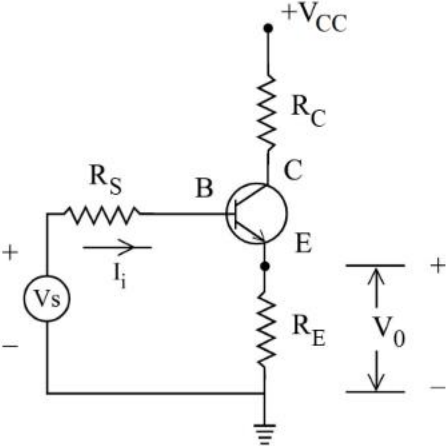
Objective Question

68	975068	Which one of the following is not vectored interrupt? 1. TRAP 2. INTR 3. RST 7.5 4. RST 3 A1 : 1 A2 : 2 A3 : 3	4.0	0.00
----	--------	---	-----	------

		A4 : 4		
Objective Question				
69	975069	In an 8085 microprocessor, the contents of Accumulator, after the following instructions are executed will become_____ XRA A MVI B FO H SUB B 1. 01 H 2. 0F H 3. F0 H 4. 10 H A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	0.00
Objective Question				
70	975070	The following devices are given: A. Cache memory B. CDROM C. Dynamic RAM D. Processor Register E. Magnetic tape The increasing order of speed of data access of above devices are _____ 1. E, B, C, D, A 2. E, B, C, A, D 3. B, A, C, D, E 4. E, B, A, C, D A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	0.00
Objective Question				
71	975071	Which of the following statement is not correct 1. Electron emission takes place in vacuum 2. The amount of energy required for the escape of electrons varies with different materials. 3. Metals with lower work function will emit electrons at lower temperatures. 4. At ordinary temperatures, the energy of free-electrons in the metals is more than the work function of the metals.	4.0	0.00

10/30/23, 10:35 AM	224_SCPH09_E_Live_1-100.html		
		A1 : 1	
		A2 : 2	
		A3 : 3	
		A4 : 4	

Objective Question

72	975072	In the BJT emitter follower circuit shown in figure, the circuit component values are $R_s = 600\ \Omega$, $R_c = 4.7\ \text{k}\Omega$, $R_E = 2\ \text{k}\Omega$, $h_{fe} = 80$, $h_{ie} = 5$. The voltage gain without feedback and with feedback is  1. 285.7 and 2.857 2. 28.57 and 0.966 3. 2.857 and 9.66 4. 0.2857 and 0.966 A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	0.00
----	--------	--	-----	------

Objective Question

73	975073	Choose the correct answer A. FET input impedance is higher than BJT B. FET is less temperature stable than BJT C. FET is more noisy than BJT D. FET is a voltage controlled device while BJT is a current controlled device. 1. A and D are correct 2. A, B and D are correct 3. A, B are correct 4. B, C and D are correct A1 : 1	4.0	0.00
----	--------	--	-----	------

		A2 : 2		
		A3 : 3		
		A4 : 4		

Objective Question

74	975074	A full wave rectifier delivers 50W to a load of 200Ω. If the ripple factor is 5%, the a.c ripple voltage across the load is: 1. 1V 2. 100V 3. 5V 4. 10V A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	0.00
----	--------	---	-----	------

Objective Question

75	975075	Common collector amplifier has $V_{CC} = 10V$, $R_B = 470\text{ k}\Omega$ and $R_E = 3.3\text{ K}\Omega$. β of the silicon transistor is 100. The emitter current value is: 1. 11.58 μA 2. 11.58 A 3. 1.16 mA 4. 11.16 mA A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	0.00
----	--------	---	-----	------

Objective Question

76	975076	Power amplifier should have low output resistor to 1. provide high stability to load 2. deliver high power to load. 3. deliver low power to load 4. deliver maximum conversion efficiency to load A1 : 1 A2 : 2	4.0	0.00
----	--------	---	-----	------

		A3 : 3		
		A4 : 4		
Objective Question				
77	975077	The output of a logic gate is '1' when all its inputs are at logic '0'. Then the gate is either 1. a NAND or an EX-OR gate 2. a NOR or an EX-NOR gate 3. an OR or an EX-NOR gate 4. an AND or an EX-OR gate A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	0.00
Objective Question				
78	975078	Find the output voltage from a 5 bit ladder that has a digital input of 11010. Assume that 0 = 0V and 1 = +10V 1. +6.125 2. 8.125 3. 4.0625 4. 8.250 A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	0.00
Objective Question				
79	975079	To operate correctly, starting a ring counter requires 1. Clearing all the flip-flops 2. Presetting one flip-flop and clearing all others 3. Clearing one flip-flop and presetting all others 4. Presetting all the flip-flops. A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	0.00

Objective Question

80	975080	Determine the noise temperature of the antenna, if noise power of -100 dBm is available from a receiver antenna system over a 20 MHz bandwidth. Assume room temperature of 290°K 1. 362°K 2. 181°K 3. 724°K 4. 382°K A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	0.00
----	--------	---	-----	------

Objective Question

81	975081	The ring modulator is generally used for 1. generating SSB/SC signal 2. generating DSB/SC signal 3. generating VSB signal 4. generating wideband signal A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	0.00
----	--------	---	-----	------

Objective Question

82	975082	Match List I with List II	4.0	0.00																				
<table><tr><th colspan="2">LIST I</th><th colspan="2">LIST II</th></tr><tr><td>A.</td><td>Wideband FM</td><td>I.</td><td>Mobile Communication</td></tr><tr><td>B.</td><td>Narrowband FM</td><td>II.</td><td>TV video</td></tr><tr><td>C.</td><td>AM</td><td>III.</td><td>TV audio</td></tr><tr><td>D.</td><td>VSB-AM</td><td>IV.</td><td>Medium-wave broadcast</td></tr></table>					LIST I		LIST II		A.	Wideband FM	I.	Mobile Communication	B.	Narrowband FM	II.	TV video	C.	AM	III.	TV audio	D.	VSB-AM	IV.	Medium-wave broadcast
LIST I		LIST II																						
A.	Wideband FM	I.	Mobile Communication																					
B.	Narrowband FM	II.	TV video																					
C.	AM	III.	TV audio																					
D.	VSB-AM	IV.	Medium-wave broadcast																					
Choose the correct answer from the options given below:																								
1. A-IV ,B-III ,C-II ,D-I																								
2. A-IV ,B- I,C-II ,D-III																								
3. A-III ,B-I ,C-IV ,D-II																								
4. A-III ,B-I ,C-II ,D-IV																								
A1 : 1																								
A2 : 2																								

A3 : 3

A4 : 4

Objective Question

83	975083	Find the fourier transform of $\sin(2\pi f_0 t)e^{-\alpha t }$ 1. $\frac{1}{2j} \left[\frac{2\alpha}{\alpha^2 + (2\pi(f-f_0))^2} - \frac{2\alpha}{\alpha^2 - (2\pi(f-f_0))^2} \right]$ 2. $\frac{1}{2j} \left[\frac{2\alpha}{\alpha^2 + (2\pi(f-f_0))^2} - \frac{2\alpha}{\alpha^2 + (2\pi(f+f_0))^2} \right]$ 3. $\frac{1}{j} \left[\frac{2\alpha}{\alpha^2 - (2\pi(f-f_0))^2} - \frac{2\alpha}{\alpha^2 - (2\pi(f-f_0))^2} \right]$ 4. $\frac{1}{j} \left[\frac{2\alpha}{\alpha^2 + (2\pi(f-f_0))^2} - \frac{2\alpha}{\alpha^2 + (2\pi(f+f_0))^2} \right]$ A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	0.00
----	--------	--	-----	------

Objective Question

84	975084	Consider an angle modulated signal $x(t) = 10 \cos [(10^5)\pi t + 5 \sin 2\pi (10^3)t]$ find the maximum phase deviation and the maximum frequency deviation. 1. 5 rad and 10KHz 2. 50 rad and 50KHz 3. 50 rad and 10KHz 4. 5 rad and 5KHz A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	0.00
----	--------	---	-----	------

Objective Question

85	975085	How much power is consumed by carrier signal in case of conventional Amplitude modulation. 1. 67% 2. 33% 3. 50% 4. 75% A1 : 1	4.0	0.00
----	--------	---	-----	------

		A2 : 2		
		A3 : 3		
		A4 : 4		

Objective Question

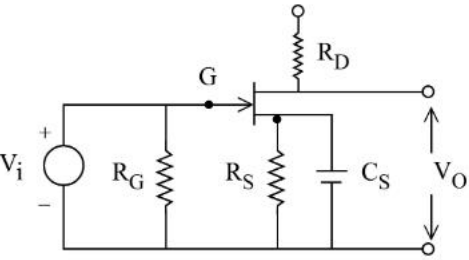
86	975086	The reverse current of silicon diode is 1. Highly bias voltage sensitive 2. Highly temperature sensitive 3. Both bias voltage and temperature sensitive 4. Independent of bias voltage and temperature A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	0.00
----	--------	--	-----	------

Objective Question

87	975087	Determine the forward resistance of a p-n junction diode, when the forward current is 5 mA at T=300 K. Assume silicon diode. 1. 10.34 Ω 2. 20.5 Ω 3. 10 Ω 4. 2 KΩ A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	0.00
----	--------	---	-----	------

Objective Question

88	975088		4.0	0.00
----	--------	--	-----	------

10/30/23, 10:35 AM	224_SCPH09_E_Live_1-100.html	
	In the common source amplifier of the given figure, let $R_D = 5\text{k}\Omega$, $R_G = 10\text{M}\Omega$, $\mu = 50$, and $r_d = 35\text{ k}\Omega$, evaluate the voltage gain of amplifier  1. -12.2 2. 20.25 3. 10.25 4. -6.25 A1 : 1 A2 : 2 A3 : 3 A4 : 4	
Objective Question		
89	975089 A multistage amplifier employs five stages each of which has a power gain of 30. What is the total gain of the amplifier in dB if a negative feedback of 20dB is used? 1. 73.85 dB 2. 80 dB 3. 53.85 dB 4. 14.77 dB A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0 0.00
Objective Question		
90	975090 The conductivity of N type semiconductor is 10 S/m and its electron mobility is $50 \times 10^{-4} \text{ m}^2/\text{V}\cdot\text{s}$. Determine the electron concentration. 1. $10 \times 10^{21} \text{ m}^{-3}$ 2. $50 \times 10^{23} \text{ m}^{-3}$ 3. $2.5 \times 10^{20} \text{ m}^{-3}$ 4. $12.5 \times 10^{21} \text{ m}^{-3}$ A1 : 1 A2 : 2	4.0 0.00

		A3 : 3		
		A4 : 4		
Objective Question				
91	975091	Alumina is a 1. Dielectric 2. Ceramic 3. Semiconductor 4. Conductor A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	0.00
Objective Question				
92	975092	Find div D at the origin $D = e^{-x} \sin y a_x - e^{-x} \cos y a_y + 2z a_z$ 1. $2 \sin y$ 2. $10 \cos y$ 3. 2 4. 10 A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	0.00
Objective Question				
93	975093	Consider the following statements for an electrostatic field. A. Its curl is zero. B. It is a negative of gradient of scalar potential Φ. C. It is conservative. 1. A and B only 2. B and C only 3. A and C only 4. A, B and C A1 : 1 A2 : 2	4.0	0.00

		A3 : 3		
		A4 : 4		
Objective Question				
94	975094	A parallel polarized wave propagate from air into dielectric at Brewster angle of 75°, calculate the relative dielectric constant of the medium. 1. 13.93 2. 12.5 3. 10.50 4. 5.4 A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	0.00
Objective Question				
95	975095	Plane $Z = 10\text{m}$ carries charge 20 nC/m^2. The electric field intensity at the origin is 1. $-72\pi\text{ 1z V/m}$ 2. $-18\pi\text{ 1z V/m}$ 3. -10 1z V/m 4. $-360\pi\text{ 1z V/m}$ A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	0.00
Objective Question				
96	975096	Which of the following statements is incorrect 1. A conductor is an equipotential body and E is always tangential to the conductor. 2. In a linear dielectric P varies linearly with E. 3. A dielectric material is linear if ϵ does not change with the applied field. 4. A dielectric material is isotropic if ϵ does not change with direction. A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	0.00

Objective Question				
97	975097	In a lossless medium the intrinsic impedance $\eta = 60\pi$ and $\mu_r = 1$. The relative dielectric constant ϵ_r shall be. 1. $\epsilon_r = 2$ 2. $\epsilon_r = 4$ 3. $\epsilon_r = 1$ 4. $\epsilon_r = 8$ A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	0.00

Objective Question				
98	975098	A current impulse $5\delta(t)$, is forced through a capacitor C. The voltage $V_c(t)$ across the capacitor is given by 1. $5t$ 2. $5u(t)$ 3. $\frac{5}{c}t$ 4. $\frac{5u(t)}{c}$ A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	0.00

Objective Question				
99	975099	A zero mean random signal is uniformly distributed between limit -a and +a and its mean square value is equal to its variance. Then the RMS value of the signal is 1. $\frac{a}{\sqrt{3}}$ 2. $\frac{a}{\sqrt{2}}$ 3. $a\sqrt{2}$ 4. $a\sqrt{3}$ A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	0.00

Objective Question				
100	975100	Two systems with impulse response $h_1(t)$ and $h_2(t)$ are connected in cascade. Then the overall impulse response of cascade system is given by 1. Product of $h_1(t)$ and $h_2(t)$ 2. Sum of $h_1(t)$ and $h_2(t)$ 3. Convolution of $h_1(t)$ and $h_2(t)$ 4. Subtraction of $h_1(t)$ and $h_2(t)$ A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	0.00