Id	**1**
Questio n	Satellite Broadcasting in C band involves _______uplink and _____downlink frequency.
A	4 GHz and 6 GHz
B	6 GHz and 4 GHz
C	2.4 GHz and 5 GHz
D	None
--	
Marks	1.5
Unit	I

Id	**2**
Question	As the frequency increases the wavelength of the electromagnetic waves becomes
A	Larger
B	Smaller
C	Initially increases then decreases
D	Constant
--	
Marks	1.5
Unit	I

Id	**3**
Question	As frequency of electromagnetic becomes very high then …….
A	Component start to deviate from there electrical properties
B	Component starts to oscillate
C	Components will create unwanted noise in the output
D	None
--	
Marks	1.5
Unit	I

Id	**4**
Questio n	Why alternating current is preferred over direct current for transmission?
A	A.C. components are cheaper than D.C. Components
B	A.C. is more efficient than D.C.
C	A.C. has less losses than D.C.
D	Both b and c
--	
Marks	1.5
Unit	I

Id	**5**
Question	KCL and KVL Laws are suitable for….
A	Low frequency and D.C. circuits
B	High frequency circuits
C	Both a and b
D	None
--	
Marks	1.5
Unit	I

Id	**6**
Question	Intrinsic Impedance of air or free space (Z_0) is___
A	377 Ω
B	37.7 Ω
C	3.77 Ω
D	None
--	
Marks	1.5
Unit	I

Id	**7**
Question	EM equations in positive z direction is given by $$E_x = E_{0x} Cos(\omega t - \beta z)$$ $$H_y = H_{0y} Cos(\omega t - \beta z)$$ Here E_{0x} and H_{0y} represents constant amplitude factors having units ______
A	Volts
B	V/m
C	Vm
D	V/A
--	
Marks	1.5
Unit	I

Id	**8**
Question	Intrinsic Impedance of the medium having relative permeability 1.5 and relative permittivity of 3.1 in Ohms is___
A	26.22
B	2.622
C	377
D	262.24
--	
Marks	1.5
Unit	I

Id	**9**
Question	In EM wave Electric field component and magnetic field components are _____
A	Mutually perpendicular to each other
B	Has phase difference of 90^{o}
C	Transverse
D	All of the above
--	
Marks	1.5
Unit	I

Id	**10**
Question	Phase velocity of EM wave travelling in a medium having relative permeability 2 and relative permittivity 1.8
A	$3*10^8$m/s
B	$5*10^8$m/s
C	$1.58*10^8$m/s
D	$4*10^8$m/s
--	
Marks	1.5
Unit	I

Id	**11**
Question	Phase velocity of EM wave travelling in free space having frequency of 30MHz and 3GHz is.
A	2.99*10^8m/s and $2..99 * 10^8$m/s
B	4*10^8m/s and 5*10^8m/s
C	4*10^8m/s and 3.5*10^8m/s
D	2*10^8m/s and 5*10^8m/s
--	
Marks	1.5
Unit	I

Id	**12**
Question	X Band has frequency range ______
A	8-12.5 GHz
B	2-4 GHz
C	2.4-8 GHz
D	4-6 GHz
--	
Marks	1.5
Unit	I

Id	**13**
Question	Capacitor with capacitance 1PF and inductor of 1nF at 60Hz has reactance values respectively.
A	$2.65 * 10^{9}\Omega$ and $3.77 * 10^{-7}\Omega$
B	$3.77 * 10^{-7}\Omega$ and $2.65 * 10^{9}\Omega$
C	$8.65 * 10^{9}\Omega$ and $3.77 * 10^{-7}\Omega$
D	$3.77 * 10^{9}\Omega$ and $8.65 * 10^{-7}\Omega$
--	
Marks	1.5
Unit	I

Id	**14**
Question	A cylindrical copper conductor of radius 0.5mm, length 80mm and conductivity of 64.516. Calculate its DC resistance
A	4.96 mΩ
B	8.15 mΩ
C	5.23 mΩ
D	1.58 mΩ
--	
Marks	1.5
Unit	I

Id	**15**
Question	As the frequency increases resistance at the center of the conductor_____
A	Decreases
B	Increases
C	Constant
D	None
--	
Marks	1.5
Unit	I

Id	**16**
Question	The skin effect is a phenomenon observed in
A	Insulators
B	Dielectrics
C	Conductors
D	Semiconductors
--	
Marks	1.5
Unit	I

Id	**17**
Question	Calculate the skin depth of a conductor in μm, having a conductivity of 200 units. The wave frequency is 10 GHz in air.
A	355.8
B	3.558
C	35.58
D	0.3558
--	
Marks	1.5
Unit	I

Id	**18**
Question	The relation between the skin depth and frequency is given by
A	Skin depth α f
B	Skin depth α 1/f
C	Skin depth α √f
D	Skin depth α 1/√f
--	
Marks	1.5
Unit	I

Id	**19**
Question	On what factors does the skin effect depend upon?
A	Cross section of the conductors.
B	Supply frequency.
C	Permeability of the conductor.
D	All of these
--	
Marks	1.5
Unit	I

Id	**20**
Question	What is the cause of skin effect?
A	Supply frequency.
B	Self inductance of conductor.
C	High sensitive material in the centre.
D	Both (a) and (b)
--	
Marks	1.5
Unit	I

Id	**21**
Question	The conductor carries more current on the surface in comparison to its core. What is this phenomenon called?
A	Ferranti effect.
B	Proximity effect.
C	Faraday’s effect
D	Skin effect.
--	
Marks	1.5
Unit	I

Id	**22**
Question	Skin effect is negligible for what supply frequency and for what diameter?
A	< 50 Hz and < 1 cm.
B	< 50 Hz and > 1 cm.
C	> 50 Hz and < 1 cm.
D	> 50 Hz and > 1 cm.
--	
Marks	1.5
Unit	I

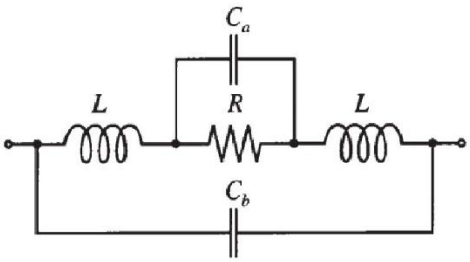
Id	**23**
Question	Which one of the following is not the type of High frequency Resistor?
A	Carbon composite resistor
B	Wire-wound resistor
C	Metal-film resistor
D	GaAs Resistor
--	
Marks	1.5
Unit	I

Id	**24**
Questio n	Determine the radius of AWG 26 wire
A	0.2032mm
B	0.4064mm
C	0.9872mm
D	0.6421mm
--	
Marks	1.5
Unit	I

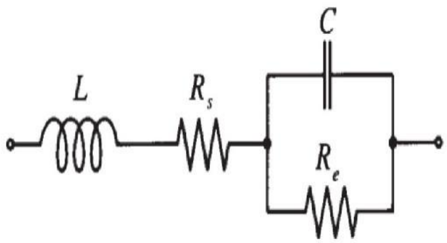
Id	**25**
Question	Determine the diameter of AWG 32 wire
A	8 mils
B	6 mils
C	4 mils
D	5 mils
--	
Marks	1.5
Unit	I

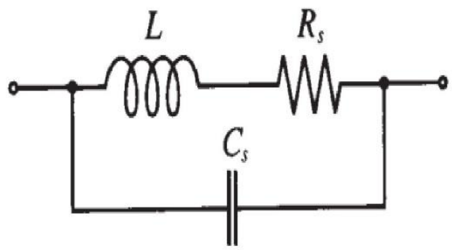
Id	**26**
Question	Determine the diameter of AWG 50 wire
A	0.0254mm
B	0.0563mm
C	0.0872mm
D	0.0421mm
--	
Marks	1.5
Unit	I

Id	**27**
Question	Determine the radius of AWG 38 wire
A	8 mils
B	6 mils
C	4 mils
D	2 mils
--	
Marks	1.5
Unit	I

Id	**28**
Questio n	The below figure shows electric equivalent circuit representation of the resistor. What is the capacitance C_b?  Electric equivalent circuit representation of the resistor.
A	Interlead capacitance
B	stray capacitance
C	coupling capacitance
D	None
--	
Marks	1.5
Unit	I

Id	**29**
Question	As the frequency increases, the stray capacitance becomes dominant, which causes the impedance of the resistor.....
A	Decrease
B	Increase
C	Upto resonance decreases and then increases
D	None
--	
Marks	1.5
Unit	I

Id	**30**
Question	The below figure shows equivalent circuit of .... 
A	High Frequency Resistor
B	High Frequency Capacitor
C	High Frequency Inductor
D	None
--	
Marks	1.5
Unit	I

Id	**31**
Question	The below figure shows equivalent circuit of .... 
A	High Frequency Resistor
B	High Frequency Capacitor
C	High Frequency Inductor
D	None
--	
Marks	1.5
Unit	I

Id	**32**
Question	At low frequencies for ideal capacitor there is ________ between the two parallel plates.
A	No current flow
B	Less current flow
C	High current flow
D	Leakage current flow
--	
Marks	1.5
Unit	I

Id	**33**
Question	At high frequencies dielectric material become
A	Lossy
B	Insulator
C	Conductor
D	None
--	
Marks	1.5
Unit	I

Id	**34**
Question	At high frequencies, which parameter is significant?
A	Conduction current
B	Displacement current
C	Attenuation constant
D	Phase constant
--	
Marks	1.5
Unit	I

Id	**35**
Question	The loss tangent is also referred to as
A	Attenuation
B	Propagation
C	Dissipation factor
D	Polarization
--	
Marks	1.5
Unit	I

Id	**36**
Question	The loss tangent of a wave propagation with an intrinsic angle of 20 degree is
A	Tan 20
B	Tan 40
C	Tan 60
D	Tan 80
--	
Marks	1.5
Unit	I

Id	**37**
Question	The expression for the loss tangent is given by
A	σ/ωε
B	ωε/σ
C	σ/ω
D	ω/ε
--	
Marks	1.5
Unit	I

Id	**38**
Question	The equivalent series resistance (ESR) is given by
A	$\frac{\tan \Delta_s}{\omega c}$
B	$\frac{\omega c}{\tan \Delta_s}$
C	ωc
D	None
--	
Marks	1.5
Unit	I

Id	**39**
Question	As equivalent series resistance ESR$\rightarrow 0$, Value of Loss tangent $\tan \Delta_s$ becomes
A	∞
B	0
C	1
D	Insufficient data
--	
Marks	1.5
Unit	I

Id	**40**
Question	Find the loss angle in degrees when the loss tangent is 1.
A	0
B	45
C	30
D	90
--	
Marks	1.5
Unit	I

Id	**41**
Question	For a perfect dielectric, which parameter will be zero?
A	Conductivity
B	Frequency
C	Permittivity
D	Permeability
--	
Marks	1.5
Unit	I

Id	**42**
Question	Calculate the velocity of a wave with frequency $2 * 10^9$ rad/s and phase constant of $4 * 10^8$ units.
A	0.5
B	5
C	0.2
D	2
--	
Marks	1.5
Unit	I

Id	**43**
Question	The intrinsic impedance is the ratio of square root of
A	Permittivity to permeability
B	Permeability to permittivity
C	Phase constant to wavelength
D	Wavelength to phase constant
--	
Marks	1.5
Unit	I

Id	**44**
Question	The expression for phase constant is given by
A	Phase constant $\beta = \omega\mu\varepsilon$
B	Phase constant $\omega = \mu\varepsilon$
C	Phase constant $\beta = \omega\sqrt{(\mu\varepsilon)}$
D	Phase constant $\beta = 1/\omega\mu\varepsilon$
--	
Marks	1.5
Unit	I

Id	**45**
Question	Which of the following materials has highest electrical conductivity
A	Steel
B	Aluminium
C	Copper.
D	Silver.
--	
Marks	1.5
Unit	I

Id	**46**
Question	The meaning of capacitance Cs in high frequency inductor circuit is
A	Series capacitance
B	Parasitic Shunt capacitance
C	Stray capacitance
D	Small capacitance
--	
Marks	1.5
Unit	I

Id	**47**
Question	The series resistance Rs in high frequency inductor circuit is
A	Composite effect of distributed capacitance Cd and resistance Rd
B	Series capacitance
C	Lead inductance effect
D	None
--	
Marks	1.5
Unit	I

Id	**48**
Question	Estimate the inductance value of RFC formed by N=3.5 turns of AWG 36 copper wire on 0.1inch air core assume that length of the coil is 0.05 inch.
A	61.4nH
B	50.5nH
C	30.2nH
D	92.8nH
--	
Marks	1.5
Unit	I

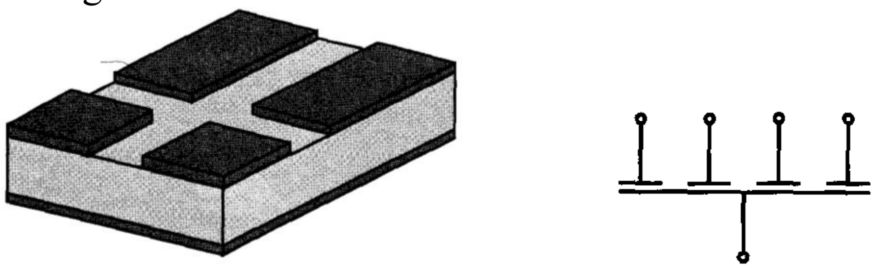
Id	**49**
Question	The behaviour of RFC deviates from expected behaviour of ideal inductance at high frequencies. Which of the following correctly explains its behaviour.
A	Initially impedance increases and post resonance impedance decreases
B	Initially impedance decreases and post resonance impedance increases
C	Remains constant
D	Increases.
--	
Marks	1.5
Unit	I

Id	**50**
Question	The size of chip resistor with size code 0402 in Length by Width in mils is.
A	40,20
B	04,02
C	04,20
D	40,02
--	
Marks	1.5
Unit	I

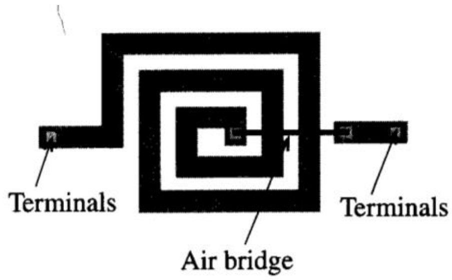
Id	**51**
Question	The size of chip resistor with size code 1206 in Length by Width in mils is.
A	120,06
B	12,60
C	12,06
D	120,60
--	
Marks	1.5
Unit	I

Id	**52**
Question	The size of chip resistor with size code 1218 in Length by Width in mils is.
A	120,180
B	12,18
C	120,18
D	12,180
--	
Marks	1.5
Unit	I

Id	**53**
Question	The size of chip resistor with size code 0802 in Length by Width in mils is.
A	80,20
B	08,02
C	08,20
D	80,02
--	
Marks	1.5
Unit	I

Id	**54**
Question	The figure shown below is … 
A	Quadrupole Chip Capacitor
B	Microstrip line
C	Electrolytic capacitor
D	Ceramic capacitor
--	
Marks	1.5
Unit	I

Id	**55**
Question	The size of single plate chip capacitor configuration for higher values of capacitance value will be ….
A	Lower
B	Higher
C	Constant
D	None
--	
Marks	1.5
Unit	I

Id	56
Question	The following diagram shows construction of 
A	Flat coil configuration
B	Circular inductor
C	Terminal congfiguration
D	None
--	
Marks	1.5
Unit	I

Id	**57**
Question	Flat Coils are used in…
A	Integrated circuits
B	Hybrid circuits
C	Both a and b
D	None
--	
Marks	1.5
Unit	I

Id	**58**
Question	the order of the denominator polynomial obtained in transfer function is equal to (natural frequencies
A	Significant zeros
B	Poles and zeros
C	Zeros
D	the number of poles
--	
Marks	1.5
Unit	II

Id	**59**
Question	Number of poles in the transfer function indicates
A	Number of energy storing elements
B	Number of zeros
C	Both a and b
D	None
--	
Marks	1.5
Unit	II

Id	**60**
Question	The method of open-circuit time constants (OC's), also known as
A	Close circuit
B	Short circuit
C	zero value time constants
D	Both a and b
--	
Marks	1.5
Unit	II

Id	**61**
Question	all-pole transfer functions has
A	All poles
B	No zeros
C	Both a and b
D	No poles
--	
Marks	1.5
Unit	II

Id	**62**
Question	By equating the denominator of transfer function to zero, which among the following will be obtained?
A	Poles
B	Zeros
C	Both a and b
D	None
--	
Marks	1.5
Unit	II

Id	**63**
Question	Basically, poles of transfer function are the laplace transform variable values which causes the transfer function to become ____________
A	Zero
B	Unity
C	Infinite
D	Average Value
--	
Marks	1.5
Unit	II

Id	**64**
Question	The SI unit for bandwidth is?
A	Hz
B	Watt
C	KHz
D	KW
--	
Marks	1.5
Unit	II

Id	**65**
Question	At bandwidth frequency range, the value of the current I is?
A	$\frac{I_m}{2}$
B	$\frac{I_m}{\sqrt{2}}$
C	${I_m}^2$
D	I_m
--	
Marks	1.5
Unit	II

Id	**66**
Question	Bandwidth is the difference of_______________________ frequencies.
A	half power
B	Full power
C	Watt power
D	Double power
--	
Marks	1.5
Unit	II

Id	**67**
Question	For a sharp resonance, bandwidth is ________________
A	Zero
B	High
C	Low
D	Infinity
--	
Marks	1.5
Unit	II

Id	**68**
Question	Q is a measure of __________
A	Resonance
B	Bandwidth
C	Selectivity
D	Either Resonance or Bandwidth
--	
Marks	1.5
Unit	II

Id	**69**
Question	Given the polynomial as follows in Open circuit time constant method the coefficient b_n in the denominator polynomial is … $$\frac{V_o(s)}{V_i(s)} = \frac{a_o}{(\tau_1 s + 1)(\tau_2 s + 1)...(\tau_n s + 1)}$$
A	The product of all of the time constants
B	The sum of all of the time constants.
C	The average of all time constants
D	The geometric mean of all time constants
--	
Marks	1.5
Unit	II

Id	**70**
Question	Given the polynomial as follows in Open circuit time constant method the coefficient b_1 in the denominator polynomial is … $$\frac{V_o(s)}{V_i(s)} = \frac{a_o}{(\tau_1 s + 1)(\tau_2 s + 1)\ldots(\tau_n s + 1)}$$
A	The product of all of the time constants
B	The sum of all of the time constants.
C	The average of all time constants
D	The geometric mean of all time constants
--	
Marks	1.5
Unit	II

Id	**71**
Question	In Open circuit time constant method we normally_______
A	Neglect higher order terms
B	Neglect lower order terms
C	Both a and b
D	None
--	
Marks	1.5
Unit	II

Id	**72**
Question	The linear combination of these individual, local limitations yields an estimate of the total bandwidth is the statement of
A	Open circuit time constant method
B	Short circuit time constant method
C	Both a and b
D	None
--	
Marks	1.5
Unit	II

Id	**73**
Question	In the below equation of open circuit time constant method R_{j0} is …. $$\omega_{h,\,est} = \frac{1}{\sum_{j=1}^{m} R_{jo} C_j}$$
A	Parallel resistance
B	Open circuit resistant facing jth capacitor
C	Short circuit resistance
D	None
--	
Marks	1.5
Unit	II

Id	**74**
Question	Open circuit time constant method estimate will be quite accurate if………
A	System has Lower order poles
B	System has Less number of poles
C	A network has more number of higher order poles
D	A network of higher order happens to be dominated by one pole
--	
Marks	1.5
Unit	II

Id	**75**
Question	the true bandwidth of a two-pole system does depend on______
A	Real part
B	Imaginary parts
C	Both a and b
D	None
--	
Marks	1.5
Unit	II

Id	**76**
Question	For two pole transfer function given below estimate of bandwidth value most accurate results are obtained for $$\omega_h = \omega_n[1 - 2\zeta^2 + \sqrt{2 - 4\zeta^2 + 4\zeta^4}]^{0.5}$$
A	$\zeta = 0.1$
B	$\zeta = 0.2$
C	$\zeta = 0.35$
D	$\zeta = 1$
--	
Marks	1.5
Unit	II

Id	**77**
Question	In Open circuit time constant method the coefficient b_1 neglects
A	Real part
B	Imaginary parts
C	Both a and b
D	None
--	
Marks	1.5
Unit	II

Id	**78**
Question	Open circuit time constants are concerned only with those capacitors that limit____________
A	High-frequency gain
B	Low-frequency gain
C	Both a and b
D	Mid-frequency gain
--	
Marks	1.5
Unit	II

Id	**79**
Question	The number of open-circuit time constants and the number of poles are_________
A	Equal
B	Not Equal
C	May be equal or not equal
D	Time constants > number of poles
--	
Marks	1.5
Unit	II

Id	**80**
Question	In a circuit if total capacitors are 4 and 1 inductor and 2 capacitors are parallel to each other then what are the number of time constants.
A	4
B	3
C	2
D	5
--	
Marks	1.5
Unit	II

Id	**81**
Question	The ratio of current from the dependent current source to the voltage between the left terminal and ground is ____________
A	Transconductance
B	Effective transconductance
C	Conductance
D	Impedance
--	
Marks	1.5
Unit	II

Id	**82**
Question	Open circuit time constant method assumes …
A	All pole transfer function
B	All zero transfer function
C	All pass transfer function
D	None
--	
Marks	1.5
Unit	II

Id	**83**
Question	Open circuit time constant method gives more accurate results when…..
A	All poles are conjugate
B	All poles are imaginary
C	All poles are complex
D	All poles are real
--	
Marks	1.5
Unit	II

Id	**84**
Question	Short-circuit time constant method works on the assumption that…..
A	All zeros exists
B	All poles exists
C	All of the zeros are at the origin, and that there are as many poles as zeros
D	Conjugate poles exists
--	
Marks	1.5
Unit	II

Id	**85**
Question	Short-circuit time constant method coefficient b1 is
A	the product of all of the pole frequencies
B	the sum of all of the pole frequencies
C	the average of all of the pole frequencies
D	the geometric mean of all of the pole frequencies
--	
Marks	1.5
Unit	II

Id	**86**
Question	Short-circuit time constant method bn is
A	the product of all of the pole frequencies
B	the sum of all of the pole frequencies
C	the average of all of the pole frequencies
D	the geometric mean of all of the pole frequencies
--	
Marks	1.5
Unit	II

Id	**87**
Question	The frequency calculated by Short-circuit time constant method is ______ than actual cutoff frequency
A	More
B	Less
C	Equal
D	May be more or less
--	
Marks	1.5
Unit	II

Id	**88**
Question	Short-circuit time constant method equation as shown the resistance R_{js} $$\omega_{l,\,est} = \sum_{j=1}^{m} \frac{1}{R_{js} C_j}$$
A	Parallel resistance
B	effective resistance facing each j^{th} capacitor with all of the other capacitors short-circuited
C	Open circuit resistant facing j^{th} capacitor
D	None
--	
Marks	1.5
Unit	II

Id	**89**
Question	the short circuit time constant estimate will be quite accurate if
A	A network of higher order happens to be dominated by one zero
B	A network of higher order happens to be dominated by one pole
C	A network has conjugate poles
D	None
--	
Marks	1.5
Unit	II

Id	**90**
Question	One must apply SCτ's only to models that are appropriate to the ____________ regime
A	High- Frequency
B	low-frequency
C	Mid-frequency
D	Both a and b
--	
Marks	1.5
Unit	II

Id	91	
Question	One must apply OCτ's only to models that are appropriate to the __________ regime	
A	High- Frequency	
B	low-frequency	
C	Mid-frequency	
D	Both a and b	
--		
Marks	1.5	
Unit	II	

Id	**92**
Question	In short circuit time constant method we normally_______
A	Neglect higher order terms
B	Neglect lower order terms
C	Both a and b
D	None
--	
Marks	1.5
Unit	II

Id	**93**
Question	The time system takes for the impulse response to reach its "center of mass," that is, the normalized value of its first moment. $$T_D \equiv \frac{\int_{-\infty}^{\infty} t h(t) dt}{\int_{-\infty}^{\infty} h(t) dt}$$
A	Time Delay
B	Delay of system connected in cascade form
C	Roll off time
D	None
--	
Marks	1.5
Unit	II

Id	**94**
Question	Rise time can be approximately given by
A	2.2RC
B	2.2/RC
C	RC/2
D	RC
--	
Marks	1.5
Unit	II

Id	**95**
Question	Compute the rise time of low pass filter having R=1KΩ , C=1μF
A	2.2s
B	22ms
C	2.2ms
D	2200s
--	
Marks	1.5
Unit	II

Id	**96**
Question	The relation between Open-Circuit Time Constants, Risetime and Bandwidth is…
A	$\mathrm{BW} \cong \frac{0.833}{\tau\sqrt{\mathrm{N}}}$
B	$\mathrm{BW} \cong \frac{\tau\sqrt{\mathrm{N}}}{0.833}$
C	$\mathrm{BW} \cong 0.833 * \tau\sqrt{\mathrm{N}}$
D	$\mathrm{BW} \cong \frac{1}{0.833 * \tau\sqrt{\mathrm{N}}}$
--	
Marks	1.5
Unit	II

Id	97
Question	Which capacitors assists in preventing the loss of gain due to negative feedback without affecting the DC stability of R-C Coupled amplifier?
A	Coupling capacitors (C_c)
B	Bypass capacitors (C_E)
C	Both a and b
D	None
--	
Marks	1.5
Unit	II

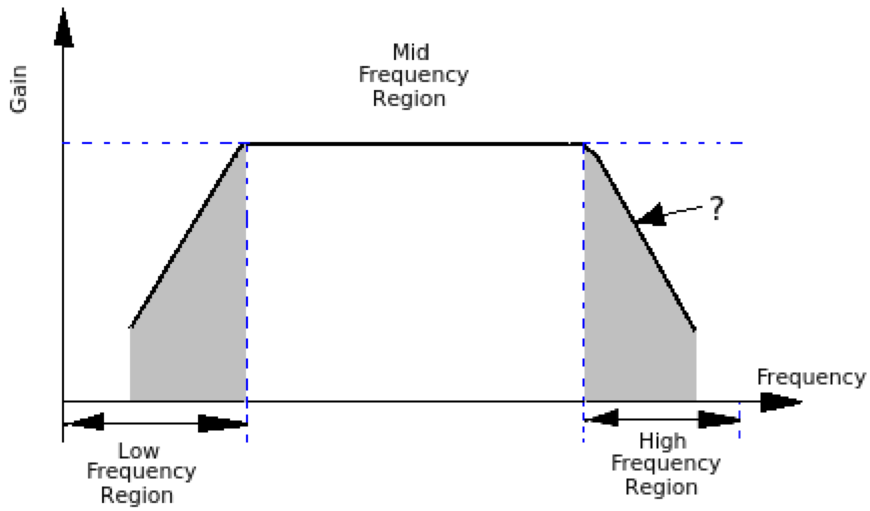
Id	**98**
Question	Which among the following is not an advantage of RC coupled amplifiers?
A	High fidelity
B	No core distortion
C	No impedance matching
D	Wide frequency response
--	
Marks	1.5
Unit	II

Id	**99**
Question	Which among the below mentioned circuits resemble its behaviour similar to that of an amplifier in high frequency region, as the response decreases with an increase in frequency?
A	Simple high pass circuit
B	Simple low pass circuit
C	Simple bandpass circuit
D	Simple bandstop circuit
--	
Marks	1.5
Unit	II

Id	**100**
Question	Fidelity is nothing but an ability of amplifier to reproduce ________
A	Input signal without any distortion
B	Output signal without any distortion
C	Phase shift signal
D	Amplitude shift signal
--	
Marks	1.5
Unit	II

Id	**101**
Question	The value of dBm in power measurement is estimated by assuming the reference ,which is equal to…. ________
A	1mW
B	10mW
C	1/10 mW
D	1/100 mW
--	
Marks	1.5
Unit	II

Id	**102**
Questio n	Which region/s in frequency response curve of an amplifier maintains the constant level of gain and output voltage?
A	Low Frequency Region
B	Mid Frequency Region
C	High Frequency Region
D	None
--	
Marks	1.5
Unit	II

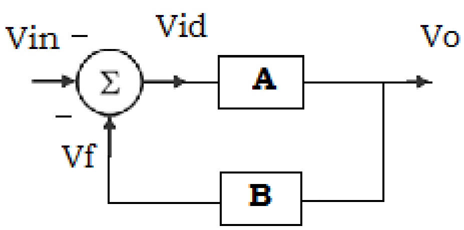
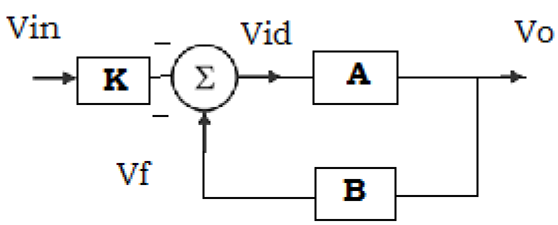
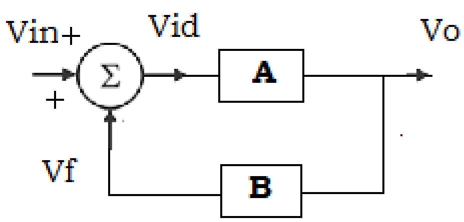
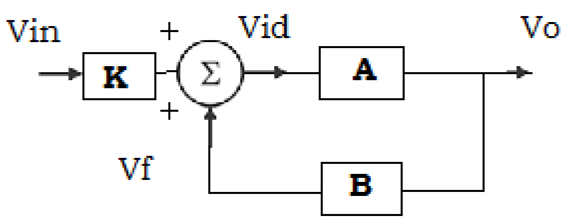
Id	**103**
Questio n	What does an arrow indicate in the below drawn schematic for frequency response curve of RC coupled amplifier? 
A	Ideal Frequency Response
B	Practical Frequency Response
C	Both a and b
D	None
--	
Marks	1.5
Unit	II

Id	**104**
Question	Voltage shunt feedback amplifier forms
A	A negative feedback
B	A positive feedback
C	Both positive and negative
D	None
--	
Marks	1.5
Unit	II

Id	**105**
Question	The value of feedback resistor and resistor connected in series with the input signal source are equal to 10kΩ and 3.3kΩ. Calculate the closed loop voltage gain?
A	-6.7
B	-33
C	-13.3
D	-3.33
--	
Marks	1.5
Unit	II

Id	**106**
Question	The formula for closed loop voltage gain of inverting amplifier with feedback using open loop voltage gain and gain of feedback circuit is.(A is open loop gain)
A	A_F= A/(1+AB)
B	A_F= -A/(1+AB)
C	A_F= -B/(1+AB)
D	None
--	
Marks	1.5
Unit	II

Id	**107**
Question	Voltage shunt feedback amplifiers are also called as
A	Non-inverting amplifier with feedback
B	Non-inverting amplifier without feedback
C	inverting amplifier with feedback
D	inverting amplifier without feedback
--	
Marks	1.5
Unit	II

Id	108
Question	Find the block diagram representation for inverting amplifier with feedback
A	
B	
C	
D	
--	
Marks	1.5
Unit	II

Id	**109**
Question	The inverting input inverting of the voltage shunt feedback resistor is a commonly named as
A	Terminal ground
B	Virtual ground
C	Virtual input
D	Resistive input
--	
Marks	1.5
Unit	II

Id	**110**
Question	How the peaking response is obtained?
A	Using a series LC network with op-amp
B	Using a series RC network with op-amp
C	Using a parallel LC network with op-amp
D	Using a parallel RC network with op-amp
--	
Marks	1.5
Unit	II

Id	**111**
Question	Open circuit time constants can grossly underestimate bandwidth if there are ……..in the passband
A	Poles
B	Zeros
C	Both a and b
D	None
--	
Marks	1.5
Unit	II

Id	**112**
Question	A technique that satisfies large bandwidth at low cost is known as….
A	Biasing
B	Shunting
C	Shunt peaking.
D	None
--	
Marks	1.5
Unit	II

Id	**113**
Question	Shunt peaked amplifier is common-source configuration with addition of ……
A	Inductance
B	Capacitance
C	Resistancce
D	Conductance
--	
Marks	1.5
Unit	II

Id	**114**
Question	In shunt peaked amplifier if transistor is ideal then …….. element controls bandwidth
A	Resistance (R)
B	Inductor (L)
C	Capacitance (C)
D	All of the above
--	
Marks	1.5
Unit	II

Id	**115**
Question	In shunt peaked amplifier loading on the output node represented by…
A	Resistance (R)
B	Inductor (L)
C	Capacitance (C)
D	All of the above
--	
Marks	1.5
Unit	II

Id	**116**
Question	In shunt peaked amplifier Bandwidth enhancement is provided by
A	Resistance (R)
B	Inductor (L)
C	Capacitance (C)
D	All of the above
--	
Marks	1.5
Unit	II

Id	**117**
Question	As frequency, increases gain falls of because of ….
A	Resistance
B	Inductor loading
C	Capacitive loading
D	All of the above
--	
Marks	1.5
Unit	II

Id	**118**
Question	Gain of purely resistively loaded common source amplifier is proportional to….
A	$g_m * R_L$
B	$4 * g_m * R_L$
C	
D	R_L
--	
Marks	1.5
Unit	II

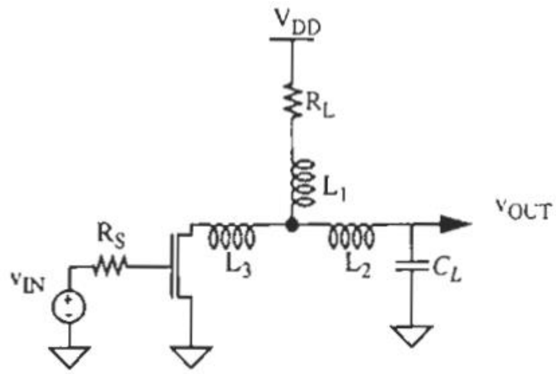
Id	**119**
Question	For shunt peaked amplifier bandwidth is ……. Times larger than unpeaked ones.
A	1.2
B	1.72
C	5
D	10
--	
Marks	1.5
Unit	II

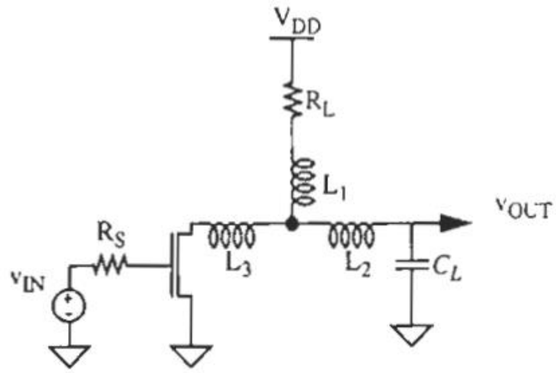
Id	**120**
Question	Phase distortion is objectionable for the ………
A	Bit errors
B	Gain
C	Both a and b
D	None
--	
Marks	1.5
Unit	II

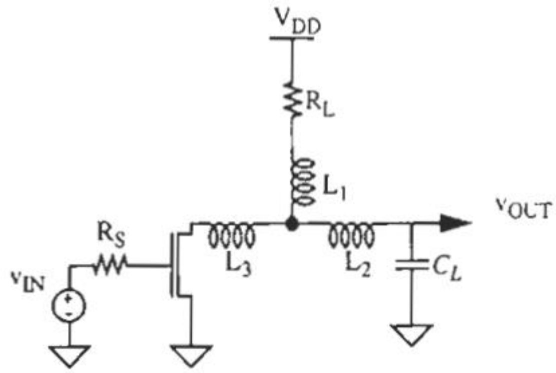
Id	**121**
Question	Larger Bandwidth extension can be achieved by choosing larger ……
A	C
B	L
C	R
D	Both a and b
--	
Marks	1.5
Unit	III

Id	**122**
Question	Shunt peaking amplifier uses …….. for bandwidth enhancer
A	Poles
B	Zeros
C	Both a and b
D	Conjugate poles
--	
Marks	1.5
Unit	III

Id	**123**
Question	The notion of cancelling pole with zero can be used to …….
A	Increase Bandwidth
B	Increase gain
C	Decrease bandwidth
D	None
--	
Marks	1.5
Unit	III

Id	**124**
Question	In the absence of L_1 the maximum bandwidth is …… times that of uncompensated case. 
A	2
B	1.8
C	$\sqrt{2}$
D	1
--	
Marks	1.5
Unit	III

Id	125
Question	Risetime in the drain is improved by…… 
A	L_2
B	L_3
C	C_L
D	R_L
--	
Marks	1.5
Unit	III

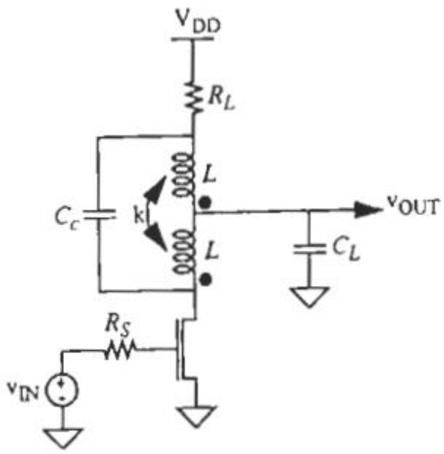
Id	**126**
Question	In the diagram shown below network charges capacitance in ……… 
A	Series
B	Parallel
C	Both a and b
D	None
--	
Marks	1.5
Unit	III

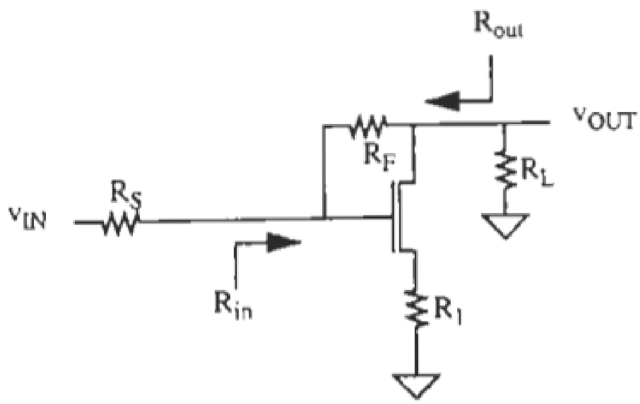
Id	**127**
Question	In shunt and double-series peaking small bridging capacitance is added across the inductors to create ……..
A	Series resonance
B	Parallel resonance
C	Connection
D	None
--	
Marks	1.5
Unit	III

Id	**128**
Question	In shunt and double-series peaking Couple inductances should each have a value
A	$L = \frac{R^2 C_L}{2(1+k)}$
B	$L = \frac{R^2 C_L}{(1+k)}$
C	$L = \frac{2 * R^2 C_L}{(1+k)}$
D	$L = \frac{R^2 C_L}{(2+k)}$
--	
Marks	1.5
Unit	III

Id	**129**
Question	In shunt and double-series peaking bridging capacitance should have a value of ….
A	$C_c = \frac{4 * C_L}{k}\left[\frac{1-k}{1+k}\right]$
B	$C_c = \frac{C_L}{4}\left[\frac{1-k}{1+k}\right]$
C	$C_c = \frac{C_L}{2}\left[\frac{1-k}{1+k}\right]$
D	$C_c = \frac{2 * C_L}{k}\left[\frac{1-k}{1+k}\right]$
--	
Marks	1.5
Unit	III

Id	**130**
Question	With T coil bandwidth enhancement technique we can get …….. times bandwidth
A	1.414
B	2
C	1.5
D	2.83
--	
Marks	1.5
Unit	III

Id	**131**
Question	The following diagram shows ….. bandwidth enhancement circuit method 
A	T-coil bandwidth enhancement
B	Shunt and series peaking
C	Zero peaked
D	Shunt peaked
--	
Marks	1.5
Unit	III

Id	**132**
Question	The following diagram shows …. 
A	Series-shunt amplifier
B	Shunt-series amplifier
C	Shunt-shunt amplifier
D	Series-series amplifier
--	
Marks	1.5
Unit	III

Id	**133**
Question	In shunt series amplifier Voltage gain of the amplifier from the gate to drain is approximately
A	$\frac{R_F}{R_1}$
B	$\frac{-R_F}{R_1}$
C	$\frac{-R_L}{R_1}$
D	$\frac{R_L}{R_1}$
--	
Marks	1.5
Unit	III

Id	**134**
Question	In shunt series amplifier Voltage gain of the amplifier R_{in} is approximately given by
A	$R_{in} = \frac{R_F}{1 - \frac{R_L}{R_1}}$
B	$R_{in} = \frac{2 * R_F}{1 + \frac{R_L}{R_1}}$
C	$R_{in} = \frac{2 * R_F}{1 - \frac{R_L}{R_1}}$
D	$R_{in} = \frac{R_F}{1 + \frac{R_L}{R_1}}$
--	
Marks	1.5
Unit	III

Id	**135**
Question	Effective transconductance of a common-source amplifier with source degeneration is …
A	$g_{m,eff} = \frac{2 * g_m}{1 + g_m R_1}$
B	$g_{m,eff} = \frac{g_m}{1 + g_m R_1}$
C	$g_{m,eff} = \frac{g_m}{1 - g_m R_1}$
D	$g_{m,eff} = \frac{2 * g_m}{1 - g_m R_1}$
--	
Marks	1.5
Unit	III

Id	**136**
Question	$f_T$doubling circuits it increases bandwidth upto…
A	50% increases
B	30% increases
C	80% increases
D	100% increases
--	
Marks	1.5
Unit	III

Id	**137**
Question	Gain over narrow frequency range centered about some high frequency is the characteristics of …
A	Power amplifier
B	Broadband amplifier
C	Tuned amplifier
D	Ultra-wideband amplifier
--	
Marks	1.5
Unit	III

Id	138
Question	Ideally for amplifiers the gain bandwidth product must be …..
A	Greater than 1
B	Constant
C	Zero
D	Infinity
--	
Marks	1.5
Unit	III

Id	**139**
Questio n	At low frequencies inductor acts as ….
A	Short circuit
B	Open circuit
C	Zero reactance
D	Both a and c
--	
Marks	1.5
Unit	III

Id	**140**
Question	A tuned amplifier uses ……………. load
A	Resistive
B	Capacitive
C	LC tank
D	Inductive
--	
Marks	1.5
Unit	III

Id	**141**
Question	A tuned amplifier is generally operated in ……………. operation
A	Class A
B	Class C
C	Class B
D	None
--	
Marks	1.5
Unit	III

Id	**142**
Question	A tuned amplifier is used in …………… applications
A	Radio frequency
B	Low frequency
C	Audio frequency
D	None
--	
Marks	1.5
Unit	III

Id	**143**
Question	At series or parallel resonance, the circuit power factor is …………..
A	0
B	5
C	1
D	8
--	
Marks	1.5
Unit	III

Id	**144**
Question	The voltage gain of a tuned amplifier is ……………. at resonant frequency
A	Minimum
B	Maximum
C	Half-way between maximum and minimum
D	Zero
--	
Marks	1.5
Unit	III

Id	**145**
Question	At parallel resonance, the line current is ………………
A	Minimum
B	Maximum
C	Infinity
D	Zero
--	
Marks	1.5
Unit	III

Id	**146**
Question	At series resonance, the circuit offers …………….. impedance
A	Zero
B	Maximum
C	Minimum
D	None
--	
Marks	1.5
Unit	III

Id	**147**
Question	A resonant circuit contains ……………… elements
A	R and L only
B	R and C only
C	C and L
D	Only R
--	
Marks	1.5
Unit	III

Id	**148**
Question	At series or parallel resonance, the circuit behaves as a …………….. load
A	Capacitive
B	Resistive
C	Inductive
D	None
--	
Marks	1.5
Unit	III

Id	**149**
Question	When either L or C is increased, the resonant frequency of LC circuit ……………
A	Remains same
B	Increases
C	Decreases
D	Insufficient data
--	
Marks	1.5
Unit	III

Id	**150**
Question	The Q of an LC circuit is given by …………………
A	$2\pi f_r * R$
B	$\frac{R}{2\pi f_r}$
C	$\frac{2\pi f_r L}{R}$
D	$\frac{R}{2\pi f_r L}$
--	
Marks	1.5
Unit	III

Id	**151**
Question	Compute the inductance associated with the leads of the high frequency capacitor of capacitance value 47pF at 1GHz whose dielectric medium consists of an aluminium oxide possessing a series loss tangent of 10^{-4} (assumed to be frequency independent) and whose leads are 1.25cm AWG 26 copper wires ($\sigma_{cu} = 64.516 * 10^6 \Omega^{-1} m^{-1}$)
A	24.38nH
B	24.38pH
C	24.38μH
D	24.38mH
--	
Marks	1.5
Unit	I

Id	**152**
Question	Compute the series resistance associated with the leads of the high frequency capacitor of capacitance value 47pF at 1GHz whose dielectric medium consists of an aluminium oxide possessing a series loss tangent of 10^{-4} (assumed to be frequency independent) and whose leads are 1.25cm AWG 26 copper wires ($\sigma_{cu} = 64.516 * 10^6 \Omega^{-1} m^{-1}$)
A	151.789mΩ
B	1.51789mΩ
C	15.1789mΩ
D	151.789μΩ
--	
Marks	1.5
Unit	I

Id	**153**
Question	Compute the parallel leakage resistance of the high frequency capacitor of capacitance value 47pF at 1GHz whose dielectric medium consists of an aluminium oxide possessing a series loss tangent of 10^{-4} (assumed to be frequency independent) and whose leads are 1.25cm AWG 26 copper wires ($\sigma_{cu} = 64.516 * 10^{6}\Omega^{-1}m^{-1}$)
A	33.9 KΩ
B	3.39 KΩ
C	33.9 MΩ
D	339 KΩ
--	
Marks	1.5
Unit	I

Id	**154**
Question	Capacitance increases with ___________
A	Increase in distance between the plates
B	Decrease in plate area
C	Decrease in distance between the plates
D	Increase in density of the material
--	
Marks	1.5
Unit	I

Id	**155**
Question	Typical sizes of surface mounted wire wound inductors range from ……
A	60 by 30 mils to 180 by 120 mils
B	200 by 240 mils to 300 by 280 mils
C	360 by 300 mils to 400 by 380 mils
D	420 by 440 mils to 500 by 480 mils
--	
Marks	1.5
Unit	I