Id	1.
Question	The type of systems which are characterized by input and the output quantized at certain levels are called as
A	analog
B	discrete
C	continuous
D	digital
Marks	2
Unit	1

Id	2
Question	The type of systems which are characterized by input and the output capable of taking any value in a particular set of values are called as
A	analog
B	discrete
C	digital
D	continuous
Marks	2
Unit	2

Id	3
Question	An example of a discrete set of information/system is
A	the trajectory of the Sun
B	data on a CD
C	universe time scale
D	movement of water through a pipe
Marks	2
Unit	2

Id	4
Question	A system which is linear is said to obey the rules of
A	scaling
B	additivity
C	both scaling and additivity
D	homogeneity
Marks	2
Unit	2

Id	5
Question	A time invariant system is a system whose output
A	increases with a delay in input
B	decreases with a delay in input
C	remains same with a delay in input
D	vanishes with a delay in input
Marks	2
Unit	2

Id	6
Question	Should real time instruments like oscilloscopes be time invariant?
A	Yes
B	Sometimes
C	Never
D	They have no relation with time variance
Marks	2
Unit	2

Id	7
Question	All real time systems concerned with the concept of causality are
A	non causal
B	causal
C	neither causal nor non causal
D	memoryless
Marks	2
Unit	2

Id	8
Question	A system is said to be defined as non causal, when
A	the output at the present depends on the input at an earlier time
B	the output at the present does not depend on the factor of time at all
C	the output at the present depends on the input at the current time
D	the output at the present depends on the input at a time instant in the future
Marks	2
Unit	2

Id	9
Question	When we take up design of systems, ideally how do we define the stability of a system?
A	A system is stable, if a bounded input gives a bounded output, for some values of the input
B	A system is unstable, if a bounded input gives a bounded output, for all values of the input
C	A system is stable, if a bounded input gives a bounded output, for all values of the input
D	A system is unstable, if a bounded input gives a bounded output, for some values of the input
Marks	2
Unit	2

Id	10
Question	All causal systems must have the component of
A	memory
B	time invariance
C	stability
D	linearity
Marks	2
Unit	2

Id	11
Question	Amplifiers, motors, filters etc. are examples for which type of system?
A	Distributed parameter systems
B	Unstable systems
C	Discrete time systems
D	Continuous time systems
Marks	2
Unit	2

Id	12
Question	Which among the following systems are described by partial differential functions?
A	Causal Systems and Dynamic systems
B	Distributed parameter systems and linear systems
C	Distributed parameter systems and Dynamic systems
D	Causal systems and linear systems
Marks	2
Unit	2

Id	13
Question	Which one of the following systems is causal?
A	y(t)=x(t)+x(t-3)+x(t2)
B	y(n)=x(n+2)
C	y(t)=x(t-1)+x(t-2)
D	y(n)=x(2n2)
Marks	2
Unit	2

Id	14
Question	A system produces zero output for one input and same gives the same output for several other inputs. What is the system called?
A	Non – invertible System
B	Invertible system
C	Non – causal system
D	Causal system
Marks	2
Unit	2

Id	15
Question	Which among the following is a LTI system?
A	dy(t)/dt+ty(t)=x(t)
B	y(t)=x(t)cospt
C	y(n)=x(n)+nx(n-1)
D	y(n)=x3 (n+1)
Marks	2
Unit	2

Id	16
Question	Which of the following signals are monotonic in nature?
A	1-exp(-t)
B	1-exp(sin(t))
C	log(tan(t))
D	cos(t)
Marks	2
Unit	1

Id	17
Question	For the signal, x(t) = log(cos(a*pi*t+d)) for a = 50 Hz, what is the time period of the signal, if periodic?
A	0.16s
B	0.08s
C	0.12s
D	0.04s
Marks	2
Unit	1

Id	18
Question	What are the steady state values of the signals, 1-exp(-t), and 1-k*exp(-k*t)?
A	1, k
B	1, 1/k
C	k, k
D	1, 1
Marks	2
Unit	1

Id	19
Question	For a bounded function, is the integral of the function from -infinity to +infinity defined and finite?
A	Yes
B	Never
C	Not always
D	None of the mentioned
Marks	2
Unit	1

Id	20
Question	For the signal x(t) = a – b*exp(-ct), what is the steady state value, and the initial value?
A	c, b
B	c, c-a
C	a, a-b
D	b, a-b
Marks	2
Unit	1

Id	21
Question	For a double sided function, which is odd, what will be the integral of the function from -infinity to +infinity equal to?
A	Non-zero Finite
B	Zero
C	Infinite
D	None of the mentioned
Marks	2
Unit	2

Id	22
Question	Is the signal x(t) = exp(-t)*sin(t) periodic in nature?
A	Yes
B	No
C	Periodic and odd
D	Periodic and even
Marks	2
Unit	1

Id	23
Question	A signal is a physical quantity which does not vary with _____
A	Time
B	Space
C	Independent Variables
D	Dependent Variables
Marks	2
Unit	1

Id	24
Question	Most of the signals found in nature are _____
A	Continuous-time and discrete-time
B	Continuous-time and digital
C	Digital and Analog
D	Analog and Continuous-time
Marks	2
Unit	1

Id	25
Question	Which one of the following is not a characteristic of a deterministic signal?
A	Exhibits no uncertainty
B	Instantaneous value can be accurately predicted
C	Exhibits uncertainty
D	Can be represented by a mathematical equation
Marks	2
Unit	1

Id	26
Question	Determine the fundamental period of the following signal:sin60t.
A	1/60 sec
B	1/30 sec
C	1/20 sec
D	1/10 sec
Marks	2
Unit	1

Id	27
Question	Sum of two periodic signals is a periodic signal when the ratio of their time periods is _____
A	A rational number
B	An irrational number
C	A complex number
D	An integer
Marks	2
Unit	1

Id	28
Question	Determine the Time period of: x(t)=3 cos?(20t+5)+sin?(8t-3).
A	1/10 sec
B	1/20 sec
C	2/5 sec
D	d 2/4 sec
Marks	2
Unit	1

Id	29
Question	Determine the odd component of the signal: x(t)=cost+sint.
A	sint
B	2sint
C	cost
D	2cost
Marks	2
Unit	1

Id	30
Question	For an energy signal _____
A	E=0
B	P= 8
C	E= 8
D	P=0
Marks	2
Unit	1

Id	31
Question	Determine the power of the signal: x(t) = cos(t).
A	1/2
B	1
C	3/2
D	2
Marks	2
Unit	1

Id	32
Question	A signal is anti-causal if _____
A	x(t) = 0 for t = 0
B	x(t) = 1 for t < 0
C	x(t) = 1 for t > 0
D	x(t) = 0 for t > 0
Marks	2
Unit	1

Id	33
Question	Is the signal x(n) = u(n + 4) – u(n – 4) causal?
A	YES
B	NO
C	Causal and odd
D	Causal and even
Marks	2
Unit	1

Id	34
Question	What is single-valued function?
A	Single value for all instants of time
B	Unique value for every instant of time
C	A single pattern is followed by after ‘t’ intervals
D	Different pattern of values is followed by after ‘t’ intervals of time
Marks	2
Unit	1

Id	35
Question	In real valued function and complex valued function, time is _____
A	Real
B	Complex
C	Imaginary
D	Not predictable
Marks	2
Unit	1

Id	36
Question	Discrete time signal is derived from continuous time signal by _____ process.
A	Addition
B	Multiplying
C	Sampling
D	Addition and multiplication
Marks	2
Unit	1

Id	37
Question	If x (-t) = -x (t) then the signal is said to be _____
A	Even signal
B	Odd signal
C	Periodic signal
D	Non periodic signal
Marks	2
Unit	1

Id	38
Question	Which of the following is true for complex-valued function?
A	X (-t) = x*(t)
B	X (-t) = x(t)
C	X (-t) = – x(t)
D	X (-t) = x*(-t)
Marks	2
Unit	1

Id	39
Question	When x(t) is said to be non periodic signal?
A	a) If the equation x (t) = x (t + T) is satisfied for all values of T
B	b) If the equation x (t) = x (t + T) is satisfied for only one value of T
C	c) If the equation x (t) = x (t + T) is satisfied for no values of T
D	d) If the equation x (t) = x (t + T) is satisfied for only odd values of T
Marks	2
Unit	1

Id	40
Question	Fundamental frequency x[n] is given by _____
A	Omega = 2*pi /N
B	Omega = 2*pi*N
C	Omega = 4*pi *2N
D	Omega = pi / N
Marks	2
Unit	1

Id	41
Question	Noise generated by an amplifier of radio is an example for?
A	Discrete signal
B	Deterministic signal
C	Random signal
D	Periodic signal
Marks	2
Unit	1

Id	42
Question	Which of the following is an example of amplitude scaling?
A	Electronic amplifier
B	Electronic attenuator
C	Both amplifier and attenuator
D	Adder
Marks	2
Unit	1

Id	43
Question	Which of the passive component performs differentiation operation?
A	Resistor
B	Capacitor
C	Inductor
D	Amplifier
Marks	2
Unit	2

Id	44
Question	Which of the component performs integration operation?
A	Resistor
B	Diode
C	Capacitor
D	Inductor
Marks	2
Unit	2

Id	45
Question	Time scaling is an operation performed on _____
A	Dependent variable
B	Independent variable
C	Both dependent and independent variable
D	Neither dependent nor independent variable
Marks	2
Unit	1

Id	46
Question	What are the conditions called which are required for a signal to fulfil to be represented as Fourier series?
A	Dirichlet’s conditions
B	Gibbs phenomenon
C	Fourier conditions
D	Fourier phenomenon
Marks	2
Unit	3

Id	47
Question	The time period of continuous-time sinusoidal signal is given by _____
A	T = 2pi / w
B	T = 2pi / 3w
C	T = pi / w
D	T = pi / 2w
Marks	2
Unit	1

Id	48
Question	X [n] = 2 cos (2n) is periodic or not?
A	Periodic with period 2n
B	Periodic with period 2p
C	Periodic with period 2
D	Non periodic
Marks	2
Unit	1

Id	49
Question	The step function u (t) is integral of _____ with respect to time t.
A	Ramp function
B	Impulse function
C	Sinusoidal function
D	Exponential function
Marks	2
Unit	1

Id	50
Question	Unit impulse ∂(t) is _____ of time t.
A	Odd function
B	Even function
C	Neither even nor odd function
D	Odd function of even amplitude
Marks	2
Unit	1

Id	51
Question	ð(at) = 1⁄a ð(t), this property of unit impulse is called _____
A	Time shifting property
B	Time scaling property
C	Amplitude scaling property
D	Time reversal property
Marks	2
Unit	1

Id	52
Question	y(t) = x(t-2) + x(2-t). Comment on its causality:
A	Causal
B	Time variant
C	Non causal
D	All of the mentioned
Marks	2
Unit	2

Id	53
Question	Comment on the linearity of y[n] = n*x[n].
A	Linear
B	Only additive
C	Not scalable
D	Non linear
Marks	2
Unit	1

Id	54
Question	Which of the following systems is linear?
A	$y(t) = \sin(x(t))$
B	$y(t) = \log(x(t))$
C	$y(t) = \cos(x(t))$
D	$y(t) = dx(t)/dt$
Marks	2
Unit	2

Id	55
Question	Which of the following systems is stable?
A	y(t) = log(x(t))
B	y(t) = exp(x(t))
C	y(t) = sin(x(t))
D	y(t) = tx(t) + 1
Marks	2
Unit	2

Id	56
Question	Which of the following systems is time invariant?
A	$y(t) = x(2t) + x(t)$
B	$y(t) = x(t) + x(1-t)$
C	$y(t) = -x(t) + x(1-t)$
D	$y(t) = x(t) + x(t-1)$
Marks	2
Unit	2

Id	57
Question	Which one of the following is an example of a system with memory?
A	Identity System
B	Resistor
C	y(n)=x(n)-2x(n)
D	Accumulator
Marks	2
Unit	2

Id	58
Question	Which among the following is a memory less system?
A	Delay
B	Summer
C	Resistor
D	Capacitor
Marks	2
Unit	2

Id	59
Question	Determine the nature of the system: y(n)=x(-n).
A	Causal
B	Non-causal
C	Causal for all positive values of n
D	Non-causal for negative values of n
Marks	2
Unit	2

Id	60
Question	Which among the following is an application of non-causal system?
A	Image processing
B	RC circuit
C	Stock market Analysis
D	Automobile
Marks	2
Unit	2

Id	61
Question	Determine the nature of the given system: y(t)=x(sint)
A	Causal, Non-linear
B	Causal, Linear
C	Non-Causal, Non-linear
D	Non-causal, Linear
Marks	2
Unit	2

Id	62
Question	A system is said to be linear if _____
A	It satisfies only the principle of superposition theorem
B	It satisfies only amplitude scaling
C	It satisfies both amplitude scaling and principle of superposition theorem
D	It satisfies amplitude scaling but not the principle of superposition theorem
Marks	2
Unit	2

Id	63
Question	What is a stable system?
A	If every bounded input results in the bounded output
B	If every bounded input results in an unbounded output
C	If every unbounded input results in a bounded output
D	If unbounded input results in bounded as well as unbounded output
Marks	2
Unit	2

Id	64
Question	Which of the following is not true about systems having memory?
A	It is also called dynamic systems
B	The output signal depends on the past values of the input signal
C	It is also called static system
D	Resistive circuit
Marks	2
Unit	2

Id	65
Question	An example for non-causal system is _____
A	Amplifier
B	Oscillator
C	Rectifiers
D	Does not exists
Marks	2
Unit	2

Id	66
Question	Can impulse response be measured?
A	Impulse cannot be generated
B	Impulse can be generated
C	Can be measured
D	Cannot be measured
Marks	2
Unit	2

Id	67
Question	For the system, y (t) = u{x (t)} which of the following holds true?
A	System is Linear, time-invariant, causal and stable
B	System is time-invariant, causal and stable
C	System is causal and stable
D	System is stable
Marks	2
Unit	2

Id	68
Question	Is the function y[n] = y[n-1] + x[n] stable in nature?
A	It is stable
B	It is unstable
C	Both stable and unstable
D	None of the mentioned
Marks	2
Unit	2

Id	69
Question	Discrete-time signals are _____
A	Continuous in amplitude and continuous in time
B	Continuous in amplitude and discrete in time
C	Discrete in amplitude and discrete in time
D	Discrete in amplitude and continuous in time
Marks	2
Unit	1

Id	70
Question	Sinusoidal signals multiplied by decaying exponentials are referred to as
A	Amplified sinusoids
B	Neutralized sinusoids
C	Buffered sinusoids
D	Damped sinusoids
Marks	2
Unit	1

Id	71
Question	2. If n tends to infinity, is the accumulator function an unstable one?
A	a) The function is marginally stable
B	b) The function is unstable
C	c) The function is stable
D	d) None of the mentioned
Marks	2
Unit	1

Id	72
Question	What is the definition of the delta function in time space intuitively?
A	Defines that there is a point 1 at t=0, and zero everywhere else
B	Defines that there is a point 0 at t=0, and 1 everywhere else
C	Defines 1 for all t > 0, and 0 else
D	Defines an impulse of area 1 at t=0, zero everywhere else
Marks	2
Unit	1

Id	73
Question	Is it practically possible for us to provide a perfect impulse to a system?
A	Certainly possible
B	Impossible
C	Possible
D	None of the mentioned
Marks	2
Unit	2

Id	74
Question	The convolution of a discrete time system with a delta function gives
A	the square of the system
B	the system itself
C	the derivative of the system
D	the integral of the system
Marks	2
Unit	2

Id	75
Question	When is a system said to be BIBO stable?
A	When the boundary conditions of the system are stable
B	When there is stability in the overall system
C	Every Bounded input results in a bounded output
D	When the input and output conditions are stable
Marks	2
Unit	2

Id	76
Question	When does a signal say to be bounded?
A	When it is stable
B	When it gives slow responses
C	Magnitude does not grow without bound
D	When it has small inputs
Marks	2
Unit	1

Id	77
Question	How do you describe a stable system informally?

A	When small inputs lead to responses that do not diverge
B	When small inputs lead to responses that diverge
C	When large inputs lead to diverging outputs
D	All inputs lead to outputs that converge
Marks	2
Unit	2

Id	78
Question	How is a time domain system analyzed?

A	Study of a system in accordance to changes in its inputs over time
B	Study of a system in accordance to changes in its over time
C	Study of a system in accordance to changes in its overall structure over time
D	Study of a system in accordance to how a system change itself overall in a time
Marks	2
Unit	2

Id	79
Question	What is the frequency domain?

A	Analysis of signals in a frequency range
B	Analysis of signals in their bandwidth
C	Analysis of a signal with respect to its frequency
D	Study of a system in accordance to changes in its overall frequency
Marks	2
Unit	2

Id	80
Question	What is the consequence of marginally stable systems?

A	The system will turn out to be critically damped
B	The system will be an overdamped system
C	It will be a damped system
D	Purely oscillatory system
Marks	2
Unit	2

Id	81
Question	What is periodic convolution?

A	Continuous type superposition
B	Periodic type summation
C	Discrete type addition
D	Summation of both continuous and periodic type
Marks	2
Unit	1

Id	82
Question	What is a circular or cyclic convolution?

A	Convolution of a periodic and continuous time function
B	Convolution of a periodic and discrete time function
C	Superposition of periodic and periodic function
D	Summation of continuous time and a convolution of a periodic function convolution
Marks	2
Unit	1

Id	83
Question	What is the full form of the LTI system?

A	Linear time inverse system
B	Late time inverse system
C	Linearity times invariant system
D	Linear Time Invariant system
Marks	2
Unit	2

Id	84
Question	What is a unit impulse response?

A	The output of a linear system
B	The response of an invariant system
C	The output of an LTI system due to unit Impulse signal
D	The output of an input response signal
Marks	2
Unit	2

Id	85

Question	How do you define convolution?
A	Weighted superposition of time shifted responses
B	Addition of responses of an input signal
C	Multiplication or various shifted responses of a stable system
D	Superposition of various outputs
Marks	2
Unit	2

Id	86

Question	What is the difference between convolution and multiplication?
A	Convolution leads to addition and multiplication leads to the multiplication
B	Convolution is multiplication but of signals
C	Convolution is a multiplication of added signals.
D	Convolution is a multiplication of added signals.
Marks	2
Unit	2

Id	87

Question	Convolution is considered in case of _____
A	Discrete time systems only
B	Continuous time only
C	In both continuous time and discrete time
D	Superposition of various outputs
Marks	2
Unit	2

Id	88

Question	Why is a linear time invariant systems important?
A	They can be structured as wanted
B	They can be molded in any domain
C	They are easy to define
D	They can be represented as a linear combination of signals
Marks	2
Unit	2

Id	89

Question	What is a dummy variable?
A	Unused variable
B	Extra variable
C	Free variable
D	Something that is used to store extra numbers
Marks	2
Unit	2

Id	90

Question	When are dummy variables used in continuous time convolution?
A	To change the limits of integration
B	To change the domain of integration
C	To substitute time analysis
D	To substitute frequency analysis
Marks	2
Unit	2

Id	91

Question	Which is special the property listed below only holds good by an LTI system?
A	Memory
B	Stability
C	Causality
D	Distributive property
Marks	2
Unit	2

Id	92

Question	What are the three special properties that only LTI systems follow?
A	Commutative property, Associative property, Causality
B	Associative property, Distributive property, Causality
C	Commutative property, Distributive property, Associative property
D	Distributive property, Stability, Causality
Marks	2
Unit	2

Id	93

Question	An LTI system is memoryless only if _____
A	It does not store the previous value of the input
B	It does not depend on any previous value of the input
C	It does not depend on stored values of the system
D	It does not depend on the present value of the input
Marks	2
Unit	2

Id	94
Question	A continuous time LTI system is causal only when _____
A	It depends on the present value of the input
B	It depends on the past values of the input
C	Its output always depends on future values of the input
D	Its output might depend only on the past and present values of the system
Marks	2
Unit	2

Id	95
Question	An important property for causality of the system is _____
A	Initial rest
B	Final rest
C	It is memoryless
D	It is unstable
Marks	2
Unit	2

Id	96
Question	Choose the properties which are followed by a discrete time convolution?
A	Associative, commutative, distributive
B	Associative
C	Commutative and distributive
D	Distributive and associative
Marks	2
Unit	1

Id	97
Question	How can we solve discrete time convolution problems?
A	The graphical method only
B	Graphical method and tabular method
C	Graphical method, tabular method and matrix method
D	Graphical method, tabular method, matrix method and summation method
Marks	2
Unit	1

Id	98
Question	Which method uses sum of diagonal elements for discrete time convolution?
A	Matrix method only
B	Graphical method and tabular method
C	Graphical method, tabular method and matrix method
D	Graphical method, tabular method, matrix method and summation method
Marks	2
Unit	1

Id	99
Question	Which method is close to a graphical method for discrete time convolution?
A	Matrix method only
B	Tabular method
C	Tabular method and matrix method
D	Summation method
Marks	2
Unit	1

Id	100
Question	What are periodic signals?
A	The signals which change with time
B	The signals which change with frequency
C	The signal that repeats itself in time
D	The signals that repeat itself over a fixed frequency
Answer	C
Marks	2
Unit	1

Id	101
Question	What is the time period of a periodic signal in actual terms?
A	The signals which start at t=-∞ and end at t=+∞
B	The signals which have a finite interval of occurrence
C	The signals which start at t= -∞ and ends at a finite time period
D	The signals which have a short period of occurrence
Marks	2
Unit	1

Id	102
Question	What is a fundamental period?
A	Every interval of a periodic signal
B	Every interval of an aperiodic signal
C	The first interval of a periodic signal
D	The last interval of a periodic signal
Marks	2
Unit	1

Id	103
Question	Comment on the periodicity of a constant signal?
A	It is periodic
B	It is not periodic
C	It is a mixture of period and aperiodic signal
D	It depends on the signal
Marks	2
Unit	1

Id	104
Question	A discrete time periodic signal is defined as x(n)= x(n+N) How is the N defined here?
A	Samples/ cycle
B	Samples/ twice cycle
C	Fundamental period
D	Rate of change of period
Marks	2
Unit	1

Id	105
Question	What is the general range of a period of a signal?
A	It can have of any value from positive to negative
B	It can be negative
C	It can be positive
D	It is always positive
Marks	2
Unit	1

Id	106
Question	What is the area of a periodic signal in a periodic interval?
A	It depends on the situation
B	It is same as the area in the previous interval
C	It is different in different situations
D	It is the square of the fundamental period
Marks	2
Unit	3

Id	107
Question	Is the sum of discrete time periodic signals periodic?
A	No, they are not
B	Yes they are
C	Depends on the signal
D	Not periodic if their ratio is not rational
Marks	2
Unit	3

Id	108
Question	How can we generate a periodic signal from a periodic signal itself?
A	By extending a signal with duration T
B	Cannot be extended
C	By extending the periodic signal’s amplitude
D	By extending the sugar with duration 2p
Marks	2
Unit	3

Id	109
Question	What is the period of the signal: 2cost/6?
A	8π
B	16π
C	12π
D	10π
Marks	2
Unit	3

Id	110
Question	What is a fundamental angular frequency?
A	The inverse of the fundamental time period
B	The inverse of fundamental frequency
C	Fundamental frequency in radians
D	Fundamental frequency in degree
Marks	2
Unit	3

Id	111
Question	What is Eigen value?
A	A vector obtained from the coordinates
B	A matrix determined from the algebraic equations
C	A scalar associated with a given linear transformation
D	It is the inverse of the transform
Marks	2
Unit	3

Id	112
Question	Where do we use Eigen values?
A	Fashion or cosmetics
B	Communication systems
C	Operations
D	Natural herbals
Marks	2
Unit	3

Id	113
Question	Who discovered Fourier series?
A	Jean Baptiste de Fourier
B	Jean Baptiste Joseph Fourier
C	Fourier Joseph
D	Jean Fourier
Marks	2
Unit	3

Id	113
Question	What are the two types of Fourier series?
A	Trigonometric and exponential
B	Trigonometric and logarithmic
C	Exponential and logarithmic
D	Trigonometric only
Marks	2
Unit	3

Id	114
Question	How is a trigonometric Fourier series represented?
A	A0 +∑[ancos(w0t)+ ansin(w0t)]
B	∑[ancos(w0t)+ ansin(w0t)]
C	A0 *∑[ancos(w0t)+ ansin(w0t)]
D	A0 +∑[ancos(w0t)+ ansin(w0t)] + sinwt
Marks	2
Unit	3

Id	115
Question	Which are the fourier coefficients in the following?
A	a0, an and bn
B	an
C	bn
D	an and bn
Marks	2
Unit	3

Id	116
Question	What is a line spectrum?
A	Plot showing magnitudes of waveforms are called line spectrum
B	Plot showing each of harmonic amplitudes in the wave is called line spectrum
C	Plot showing each of harmonic amplitudes in the wave is called line spectrum
D	Plot showing each of harmonic amplitudes called line spectrum
Marks	2
Unit	3

Id	117
Question	What is the disadvantage of exponential Fourier series?
A	It is tough to calculate
B	It is not easily visualized
C	It cannot be easily visualized as sinusoids
D	It is hard for manipulation
Marks	2
Unit	3

Id	118
Question	Fourier series uses which domain representation of signals?
A	Time domain representation
B	Frequency domain representation
C	Both combined
D	Neither depends on the situation
Marks	2
Unit	3

Id	119
Question	How does Fourier series make it easier to represent periodic signals?
A	Harmonically related
B	Periodically related
C	Sinusoidally related
D	Exponentially related
Marks	2
Unit	3

Id	119
Question	What is the frequency shifting property of continuous time fourier series?
A	Multiplication in the time domain by a real sinusoid
B	Multiplication in the time domain by a complex sinusoid
C	Multiplication in the time domain by a sinusoid
D	Addition in the time domain by a complex sinusoid
Marks	2
Unit	3

Id	120
Question	What is the time reversal property of fourier series coefficients?
A	Time reversal of the corresponding sequence of fourier series
B	Time reversal of the last term of fourier series
C	Time reversal of the corresponding term of fourier series
D	Time reversal of the corresponding sequence
Marks	2
Unit	3

Id	121
Question	Why does the signal change while time scaling?
A	Because the frequency changes
B	Time changes
C	Length changes
D	Both frequency and time changes
Marks	2
Unit	3

Id	122
Question	What is the period of the signal when it is time shifted?
A	Changes according to the situation
B	Different in different situation
C	Remains the same
D	Takes the shifted value
Marks	2
Unit	3

Id	123
Question	Can continuous time fourier series undergo periodic convolution?
A	They cannot undergo periodic convoluion
B	They can undergo in certain situations
C	They undergo periodic convolution
D	Only even signals undergo periodic convolution
Marks	2
Unit	3

Id	124
Question	What is the multiplication property of continuous time fourier series?
A	Convolution of the signals
B	Multiplication of the elements of the signal
C	Division of the frequency domain
D	Addition of the signals in frequency domain
Marks	2
Unit	3

Id	125
Question	What is the fourier series coefficient for n=0?
A	Zero
B	Unity
C	Depends on the situation
D	Non zero positive
Marks	2
Unit	3

Id	126
Question	What is the smoothing operation?
A	Differentiation property
B	Multiplication property
C	Integration property
D	Conjugation property
Marks	2
Unit	3

Id	127
Question	What is the complex conjugate property of a fourier series?
A	It leads to convolution
B	It leads to time reversal
C	It leads to multiplication
D	It leads to addition of signals
Marks	2
Unit	3

Id	128
Question	If the signal x(t) is odd, what will be the fourier series soeffiients?
A	Real and even
B	Odd
C	Real only
D	Real and odd
Marks	2
Unit	3

Id	129
Question	If the signal x(t) is even, what will be the fourier series coefficients?
A	Real and even
B	Odd
C	Real only
D	Imaginary and odd
Marks	2
Unit	3

Id	130
Question	A series RC circuit excited by voltage V is _____
A	A memory less system
B	A causal system
C	A dynamic system
D	Static system
Marks	2
Unit	3

Id	131
Question	How can fourier series calculations be made easy?
A	Using symmetry conditions
B	Using formula
C	Using integration
D	Calculations are easy anyways
Marks	2
Unit	3

Id	132
Question	What is the product of an even signal and odd signal?
A	Even signal
B	Odd signal
C	Mixture of even and odd
D	Odd signals sometimes
Marks	2
Unit	3

Id	133
Question	When does a wave posses a quarter wave symmetry?
A	It has either even or odd symmetry
B	It has half wave symmetry
C	even/odd symmetry and half wave symmetry
D	It is even in one quarter and odd in the other
Marks	2
Unit	3

Id	134
Question	What are the types of symmetry shown by signals?
A	Even symmetry and odd symmetry
B	Even, odd and quarter wave symmetry
C	Even, odd, half-wave and quarter wave symmetry
D	Half wave symmetry
Marks	2
Unit	3

Id	135
Question	How many dirichlet’s conditions are there?
A	One
B	Two
C	Three
D	Four
Marks	2
Unit	3

Id	136
Question	What is the first Dirichlet’s condition?
A	Over any period, signal x(t) must be integrable
B	Multiplication of the signals must be continuous
C	x(t) should be continuous only
D	A signal can be integrable except break points
Marks	2
Unit	3

Id	137
Question	When is the gibbs phenomenon present in a signal x(t)?
A	Only when there is a discontinuity in the signal
B	Only when the signal is discrete
C	Only when there is a jump discontinuity in the signal
D	Gibbs phenomenon is not possible in continuous signals
Marks	2
Unit	3

Id	138
Question	Where does the gibbs phenomenon occur?
A	Gibbs phenomenon occurs near points of discontinuity
B	Gibbs phenomenon occurs only near points of discontinuity
C	Gibbs phenomenon occurs only ahead of points of discontinuity
D	Gibbs phenomenon does not occur near points of discontinuity
Marks	2
Unit	3

Id	139
Question	What causes the gibbs phenomenon?
A	Abruptly terminating the signals
B	Abruptly integrating the signals
C	x(t) should be continuous only
D	Signal should be discontinuous
Marks	2
Unit	3

Id	141
Question	When is fourier convergence theorem applicable?
A	Infinite series limit
B	Continuous function limit
C	Discrete function limit
D	Break point limits
Marks	2
Unit	3

Id	142
Question	What is the fourier convergence theorem?
A	Fourier series approximation oscillates about the numerical value
B	Fourier coefficients converge near a discontinued point
C	In any finite interval, x (t) is of unbounded variation
D	In majority finite interval, x(t) is of unbounded variation
Marks	2
Unit	3

Id	143
Question	A signal is a power signal if the signal has average power equal to _____
A	Infinite
B	Finite
C	Zero
D	Does not depend on the average power value
Marks	2
Unit	3

Id	144
Question	Convolution is used to find _____
A	Impulse of an LTI system
B	Frequency response of an LTI system
C	Time response of an LTI system
D	Phase response of an LTI system
Marks	2
Unit	3

Id	145
Question	A non sinusoidal function can be expressed as an infinite sum of ----------functions
A	sinusoidal
B	nonsinusoidal
C	cosinusodial
D	periodic
Marks	2
Unit	3

Id	146
Question	Fourier transform is especially useful because it can handle
A	Periodic signals
B	APeriodic signals
C	Discrete signals
D	Continuous signals
Marks	2
Unit	3

Id	147
Question	Which of the following is not application of fourier series
A	Digital telecom
B	Military applications
C	Medicine imaging and MRI/CT
D	None of the above
Marks	2
Unit	3

Id	148
Question	From the given conditions, what are the Dirichlet conditions? i. X(t) should be absolutely integrable ii. X(t) should have finite discontinuities iii. X(t) should have a finite number of maxima as well as minima in its domain
A	i, ii and iii
B	i and ii
C	i and iii
D	ii and iii
Marks	2
Unit	3

Id	149
Question	What is the outcome of a periodic convolution of signals in case of continuous time fourier series?
A	Division in frequency domain
B	Multiplication in frequency domain
C	Convolution is easier
D	Addition of signals in frequency domain
Marks	2
Unit	3

Id	150
Question	What are the properties of continuous time fourier series?
A	Linearity, time shifting
B	Linearity, time shifting, frequency shifting
C	Linearity, time shifting, frequency shifting, time reversal, time scaling, periodic convolution
D	Linearity, time shifting, frequency shifting, time reversal, time scaling, periodic convolution, multiplication, differentiation
Marks	2
Unit	3