

Id	1
Question	Diversity is a key aspect, it is employed in technologies like
A	WCDMA
B	HSDPA
C	LTE
D	All of the Above
Marks	1.5
Unit	1

Id	2
Question	The output of wireless system is $y_b(t) = h S_b(t)$. Where h is the =?
A	complex fading coefficient
B	fading coefficient
C	gain factor
D	fading channel
Marks	1.5
Unit	1

Id	3
Question	Diversity is a key aspect, it is employed in technologies like
A	WCDMA
B	HSDPA
C	LTE
D	All of the Above
Marks	1.5
Unit	1

Id	4
Question	Which of the following factor does not influence small scale fading?
A	Multipath propagation
B	Power density of base station
C	Speed of mobile
D	Speed of surrounding objects
Marks	1.5
Unit	1

Id	5
Question	What does the DC subcarrier indicate?
A	Identity of the cell
B	Antenna configuration
C	Center of OFDM channel
D	Format of data channel
Marks	1.5
Unit	1

Id	6
Question	Data rate for 4G WIMAX?
A	100-200Mbps
B	10-20Mbps
C	50-100Mbps
D	200-250Mbps
Marks	1.5
Unit	1

Id	7
Question	HSDPA stands for
A	high speed down packet access
B	high speed downlink pocket access
C	high speed downlink packet access
D	high speed downlink packet Antenna
Marks	1.5
Unit	1

Id	8
Question	HSUPA stands for
A	high speed uplink packet Antenna
B	high speed up packet access
C	high speed uplink packet access
D	high speed uplink pocket access
Marks	1.5
Unit	1

Id	9
Question	The 3G standard WCDMA is also known
A	UMTS
B	GPRS
C	LTE
D	GSM
Marks	1.5
Unit	1

Id	10
Question	The CDMA 2000 is another 3G standard which has a data rate of _____
A	384Kbps
B	38Kbps
C	304Kbps
D	380Kbps
Marks	1.5
Unit	1

Id	11
Question	The output of wired or wire line system is_____.
A	$y_b(t) = S_b(t) + 1$
B	$S_b(t) = y_b(t) - 1$
C	$y_b(t) = S_b(t)$.
D	$y_b(t) = 1$
Marks	1.5
Unit	1

Id	12
Question	The output of wireless system is_____.
A	$y_b(t)=hS_b(t)+1$
B	$y_b(t)=hS_b(t)$
C	$y_b(t)=1$
D	$y_b(t)=hS_b(t)-1$
Marks	1.5
Unit	1

Id	13
Question	This variation in the signal power is known as _____
A	FADING
B	Carrier Frequency
C	Power Signal
D	fad
Marks	1.5
Unit	1

Id	14
Question	What is the probability that the attenuation is worse than 20db?
A	0.01
B	1%
C	Both a and b
D	None of the above
Marks	1.5
Unit	1

Id	15
Question	Compute the SNRdb required for a probability of bit error(BER)= 10^{-6}
A	12.8dB
B	13.6dB
C	12.9dB
D	13.87dB
Marks	1.5
Unit	1

Id	16
Question	The GSM standard has a basic data rate of_____
A	64kbps
B	110kbp
C	9kbps
D	108kbps
Marks	1.5
Unit	1

Id	17
Question	Which of the following distribution is used for describing statistical time varying nature of received envelope of multipath component?
A	Log normal distribution
B	Levy distribution
C	Rayleigh distribution
D	Gaussian distribution
Marks	1.5
Unit	1

Id	18
Question	Envelope of the sum of two quadrature Gaussian noise signal obeys _____ distribution.
A	Rayleigh
B	Nakagami
C	Inverse Gaussian
D	Gamma
Marks	1.5
Unit	1

Id	19
Question	For a Rayleigh fading signal, mean and median differ by _____
A	2 dB
B	10 dB
C	0.55 dB
D	100 dB
Marks	1.5
Unit	1

Id	20
Question	For a nonfading signal component present, the small scale fading envelope distribution is _____
A	Ricean
B	Log normal
C	Gaussian
D	Rayleigh
Marks	1.5
Unit	1

Id	21
Question	Which of the reception problems below that is not due to multipath?
A	Delayed spreading
B	Rayleigh fading
C	Random Doppler shift
D	Slow fading
Marks	1.5
Unit	1

Id	22
Question	The envelope of a sinusoid plus bandpass noise has _____
A	Uniformly distributed
B	Ricean
C	Gaussian
D	Rayleigh
Marks	1.5
Unit	1

Id	23
Question	Which of the following is not a channel parameter?
A	Bandwidth
B	Coherence time
C	Rms delay spread
D	Doppler spread
Marks	1.5
Unit	1

Id	24
Question	_____ leads to time dispersion and frequency selective fading.
A	Doppler spread
B	Multipath delay spread
C	Time dispersive parameters
D	Frequency delay spread
Marks	1.5
Unit	1

Id	25
Question	Flat fading channel is also known as _____
A	Amplitude varying channel
B	Wideband channel
C	Phase varying channel
D	Frequency varying channel
Marks	1.5
Unit	1

Id	26
Question	Which of the following is not a statistical models for multipath fading channels?
A	Clarke's model for flat fading
B	Saleh and Valenzuela indoor statistical model
C	Two ray Rayleigh fading model
D	Faraday model
Marks	1.5
Unit	1

Id	27
Question	Who presented the first statistical model for multipath fading channel?
A	Ossana
B	Rayleig
C	Newton
D	Faraday
Marks	1.5
Unit	1

Id	28
Question	Which of the following is an important statistics of a Rayleigh fading useful for designing error control codes and diversity schemes?
A	Mobile speed
B	Doppler frequency
C	Level crossing rate (LCR)
D	Power density
Marks	1.5
Unit	1

Id	29
Question	The level crossing rate (LCR) is defined as expected rate at which _____ fading envelope crosses a specified level.
A	Rayleigh
B	Saleh
C	Vanezuela
D	Faraday
Marks	1.5
Unit	1

Id	30
Question	The rapid fluctuations due to small scale fading affect the _____ design.
A	Receiver
B	Transmitter
C	MSC
D	Base station
Marks	1.5
Unit	1

Id	31
Question	Which of the following is not a principle shape factor?
A	Angular spread
B	Angular constriction
C	Azimuthal direction of maximum fading
D	Angle of arrival
Marks	1.5
Unit	1

Id	32
Question	Angular constriction is a measure of how multipath concentrates about _____ azimuthal direction.
A	Single
B	Two
C	Three
D	Four
Marks	1.5
Unit	1

Id	33
Question	Small scale fades are characterized by _____ amplitude fluctuations.
A	Large
B	Small
C	Rapid
D	Slow
Marks	1.5
Unit	1

Id	34
Question	_____ is used to prevent deep fade for rapidly varying channel.
A	Modulation
B	Demodulation
C	Macroscopic diversity technique
D	Microscopic diversity technique
Marks	1.5
Unit	1

Id	35
Question	Large scale fading can be mitigated with the help of _____
A	Modulation
B	Demodulation
C	Macroscopic diversity technique
D	Microscopic diversity
Marks	1.5
Unit	1

Id	36
Question	Space diversity is also known as _____
A	Antenna diversity
B	Time diversity
C	Frequency diversity
D	Polarization diversity
Marks	1.5
Unit	1

Id	37
Question	Which of the following is not a category of space diversity technique?
A	Selection diversity
B	Time diversity
C	Feedback diversity
D	Equal gain diversity
Marks	1.5
Unit	1

Id	38
Question	Polarization diversity uses the _____ as the diversity element.
A	Modulation index
B	Carrier frequency
C	Reflection coefficient
D	Coherence time
Marks	1.5
Unit	1

Id	39
Question	Frequency diversity is implemented by transmitting information on more than one _____
A	Carrier frequency
B	Amplitude
C	Phase
D	Modulation scheme
Marks	1.5
Unit	1

Id	40
Question	Frequency diversity uses _____ as a diversity element.
A	Correlation coefficient
B	Coherence time
C	Coherence bandwidth
D	SNR
Marks	1.5
Unit	1

Id	41
Question	Time diversity repeatedly transmits information at time spacings that exceed _____
A	Coherence bandwidth
B	Dwell time
C	Run time
D	Coherence time
Marks	1.5
Unit	1

Id	42
Question	Which of the following is specified by a specific number of bit errors occurring in a given transmission?
A	Bit error rate
B	Equally likely event
C	Outage event
D	Exhaustive events
Marks	1.5
Unit	1

Id	43
Question	Irreducible BER floor is created in frequency selective channels due to _____
A	Intersymbol interference
B	Random spectral spreading
C	Time varying Doppler spread
D	Blind speed
Marks	1.5
Unit	1

Id	44
Question	Irreducible BER floor is created in non frequency selective channels due to _____
A	Intersymbol interference
B	Multipath time delay
C	Time varying Doppler spread
D	Blind speed
Marks	1.5
Unit	1

Id	45
Question	The performance of BPSK is best is term of BER because _____
A	Symbol offset interference does not exist
B	Existence of cross rail interference
C	No multipath delay
D	Doppler spread
Marks	1.5
Unit	1

Id	46
Question	A rake receiver uses multiple _____
A	Delay circuits
B	Correlators
C	Detectors
D	Flip flops
Marks	1.5
Unit	2

Id	47
Question	In maximal ratio combining, the output SNR is equal to _____
A	Mean of all individual SNRs
B	Maximum of all SNRs
C	Sum of individual SNR
D	Minimum of all SNRs
Marks	1.5
Unit	1

Id	48
Question	Which of the following multiple access techniques are used by second generation cellular systems
A	FDMA/FDD and TDMA/FDD
B	TDMA/FDD and CDMA/FDD
C	FDMA/FDD and CDMA/FDD
D	FDMA/FDD only
Marks	1.5
Unit	1

Id	49
Question	Which one is not a TDMA standard of second generation networks?
A	GSM
B	IS-136
C	AMPS
D	PDC
Marks	1.5
Unit	1

Id	50
Question	Which of the following is a CDMA standard of second generation network?
A	IS-95
B	IS-136
C	EDGE
D	ETACS
Marks	1.5
Unit	1

Id	51
Question	How many users or voice channels are supported for each 200 KHz channel in GSM?
A	Eight
B	Three
C	Sixty four
D	Twelve
Marks	1.5
Unit	1

Id	52
Question	Which modulation technique is used by GSM?
A	GMSK
B	BPSK
C	QPSK
D	GFSK
Marks	1.5
Unit	1

Id	53
Question	GSM (Global System for Mobile) was earlier also known as _____
A	Group System Mobile
B	Global Special Meaning
C	Group Special Mobile
D	Global Special Mobile
Marks	1.5
Unit	1

Id	54
Question	The 2G GSM technology uses a carrier separation of _____
A	1.25 MHz
B	200 KHz
C	30 KHz
D	300 KHz
Marks	1.5
Unit	1

Id	55
Question	UMTS use which multiple access technique?
A	CDMA
B	TDMA
C	FDMA
D	SDMA
Marks	1.5
Unit	1

Id	56
Question	How much packet data rate per user is supported by W-CDMA if the user is stationary?
A	2.048 Kbps
B	100 Mbps
C	2.048 Mbps
D	1 Gbps
Marks	1.5
Unit	1

Id	57
Question	Which of the following is not a characteristic of PN sequence?
A	Nearly equal number of 0s and 1s
B	Low correlation between shifted version of sequence
C	Non deterministic
D	Low cross-correlation between any two sequences
Marks	1.5
Unit	2

Id	58
Question	The period of a PN sequence produced by a linear m stage shift register cannot exceed _____ symbols.
A	m
B	2^m
C	2^m-1
D	2m
Marks	1.5
Unit	1

Id	59
Question	DSSS system spreads the baseband signal by _____ the baseband pulses with a pseudo noise sequence.
A	Adding
B	Subtracting
C	Multiplying
D	Dividing
Marks	1.5
Unit	1

Id	60
Question	Frequency hopping involves a periodic change of transmission _____
A	Signal
B	Frequency
C	Amplitude
D	Phase
Marks	1.5
Unit	1

Id	61
Question	In urban areas, fading occurs due to height of mobile antenna _____ than height of surrounding structure.
A	Same
B	Smaller
C	Greater
D	Very larger
Marks	1.5
Unit	1

Id	62
Question	Apparent shift in frequency in multipath wave is caused due to relative motion between_____
A	Base station and MSC
B	Mobile and surrounding objects
C	Mobile and MSC
D	Mobile and base station
Marks	1.5
Unit	1

Id	63
Question	Doppler shift is directly proportional to _____
A	Velocity
B	Height of antenna
C	Power of receiving antenna
D	Power of transmitter
Marks	1.5
Unit	1

Id	64
Question	What is the term used by ITU for a set of global standards of 3G systems?
A	IMT 2000
B	GSM
C	CDMA
D	EDGE
Marks	1.5
Unit	1

Id	65
Question	What is 3GPP?
A	Project based on W-CDMA
B	Project based on cdma2000
C	Project based on 2G standards
D	Project based on 2.5G standards
Marks	1.5
Unit	1

Id	66
Question	Which of the following is not a standard of 3G?
A	UMTS
B	Cdma2000
C	TD-SCDMA
D	LTE
Marks	1.5
Unit	1

Id	67
Question	Doppler velocity. Denoted by_____
A	H(v)
B	S(v)
C	A(v)
D	D(v)
Marks	1.5
Unit	2

Id	68
Question	Which of the following is not an application of third generation network?
A	Global Positioning System (GPS)
B	Video conferencing
C	Mobile TV
D	Downloading rate upto 1 Gbps
Marks	1.5
Unit	1

Id	69
Question	The technique that makes possible the task of listening and talking in communication system is called _____
A	Simplexing
B	Duplexing
C	Modulating
D	Multiple access technique
Marks	1.5
Unit	1

Id	70
Question	Time division duplexing uses _____ to provide both a forward and reverse link.
A	Frequency
B	Time
C	Time and frequency
D	Cell spacing
Marks	1.5
Unit	1

Id	71
Question	_____ are used to resolve and combine multipath components.
A	Equalizer
B	Registers
C	RAKE receiver
D	Frequency divider
Marks	1.5
Unit	2

Id	72
Question	Dwell time does not depend on which of the following factor?
A	Mobile station
B	Propagation
C	Interference
D	Distance between subscriber and base station
Marks	1.5
Unit	2.5

Id	73
Question	What was the typical handoff time in first generation analog cellular systems?
A	1 second
B	10 seconds
C	1 minute
D	10 milliseconds
Marks	1.5
Unit	1

Id	74
Question	2G CDMA standard – cdma one supports up to
A	8 users
B	64 users
C	32 users
D	116 users
Marks	1.5
Unit	1

Id	75
Question	Multiple access schemes are used to allow _____ mobile users to share simultaneously a finite amount of radio spectrum.
A	Many
B	One
C	Two
D	Ten-Fifteen
Marks	1.5
Unit	2

Id	76
Question	The technique that makes possible the task of listening and talking in communication system is called _____
A	Simplexing
B	Duplexing
C	Modulating
D	Multiple access technique
Marks	1.5
Unit	2

Id	77
Question	Frequency division duplexing provides _____ distinct bands of frequencies for _____ user.
A	Two, two
B	One, two
C	Two, one
D	Two, many
Marks	1.5
Unit	2

Id	78
Question	The forward band in FDD provides traffic from the mobile to base station.
A	True
B	False
C	
D	
Marks	1.5
Unit	2

Id	79
Question	The frequency separation between each forward and reverse channel changes throughout the system.
A	True
B	False
C	
D	
Marks	1.5
Unit	2

Id	80
Question	Time division duplexing uses _____ to provide both a forward and reverse link.
A	Frequency
B	Time
C	Time and frequency
D	Cell spacing
Marks	1.5
Unit	2

Id	81
Question	TDD is effective for _____
A	Fixed wireless access and users are stationary
B	Dynamic wireless access and users are stationary
C	Fixed wireless access and users are moving
D	Dynamic wireless access and users are moving
Marks	1.5
Unit	2

Id	82
Question	In wideband systems, the transmission bandwidth of a single channel _____ coherence bandwidth of the channel.
A	Equal to
B	Not related to
C	Larger than
D	Smaller than
Marks	1.5
Unit	2

Id	83
Question	In narrowband system, the channels are usually operated using TDD.
A	True
B	False
C	
D	
Marks	1.5
Unit	2

Id	84
Question	Narrowband FDMA allows users to share the same radio channel allocating a unique time slot to each user.
A	True
B	False
C	
D	
Marks	1.5
Unit	2

Id	85
Question	Which of the following is not an objective for channel assignment strategies?
A	Efficient utilization of spectrum
B	Increase of capacity
C	Minimize the interference
D	Maximize the interference
Marks	1.5
Unit	2

Id	86
Question	The choice of channel assignment strategy does not impact the performance of the system.
A	True
B	False
C	
D	
Marks	1.5
Unit	2

Id	87
Question	In fixed channel assignment strategy, each cell is allocated a predetermined set of _____
A	Voice channels
B	Control channels
C	Frequency
D	base stations
Marks	1.5
Unit	2

Id	88
Question	What happen to a call in fixed channel strategy, if all the channels in a cell are occupied?
A	Queued
B	Cross talk
C	Blocked
D	Delayed
Marks	1.5
Unit	2

Id	89
Question	What is a borrowing strategy in fixed channel assignments?
A	Borrowing channels from neighbouring cell
B	Borrowing channels from neighbouring cluster
C	Borrowing channels from same cell
D	Borrowing channels from other base station in same cell
Marks	1.5
Unit	2

Id	90
Question	In dynamic channel assignment strategy, voice channels are allocated to different cells permanently.
A	True
B	False
C	
D	
Marks	1.5
Unit	2

Id	91
Question	In dynamic channel assignment strategy, base station requests channel from _____
A	MSC
B	Neighbouring cell
C	Neighbouring cluster
D	Neighbouring base station
Marks	1.5
Unit	2

Id	92
Question	Dynamic channel assignment reduces the likelihood of blocking in comparison to fixed channel assignment.
A	True
B	False
C	
D	
Marks	1.5
Unit	2

Id	93
Question	RSSI stands for _____
A	Radio System Signal Indicator
B	Restricted Signal Strength Indicator
C	Radio Signal Strength Indication
D	Restricted System Software Indicator
Marks	1.5
Unit	2

Id	94
Question	What is the drawback of dynamic channel assignment?
A	Decrease channel utilization
B	Increase probability of blocked call
C	Cross talk
D	Increase storage and computational load on system
Marks	1.5
Unit	2

Id	95
Question	Cellular concept replaces many low power transmitters to a single high power transmitter.
A	True
B	False
C	
D	
Marks	1.5
Unit	2

Id	96
Question	Why neighboring stations are assigned different group of channels in cellular system?
A	To minimize interference
B	To minimize area
C	To maximize throughput
D	To maximize capacity of each cell
Marks	1.5
Unit	2

Id	97
Question	What is a cell in cellular system?
A	A group of cells
B	A group of subscribers
C	A small geographical area
D	A large group of mobile systems
Marks	1.5
Unit	2

Id	98
Question	What is frequency reuse?
A	Process of selecting and allocating channels
B	Process of selection of mobile users
C	Process of selecting frequency of mobile equipment
D	Process of selection of number of cells
Unit	2

Id	99
Question	Which of the following is a universally adopted shape of cell?
A	Square
B	Circle
C	Triangle
D	Hexagon
Marks	1.5
Unit	2

Id	100
Question	Actual radio coverage of a cell is called _____
A	Fingerprint
B	Footprint
C	Imprint
D	Matrix
Marks	1.5
Unit	2

Id	101
Question	Why the shape of cell is not circle?
A	Omni directionality
B	Small area
C	Overlapping regions or gaps are left
D	Complex design
Marks	1.5
Unit	2

Id	102
Question	What is the main reason to adopt hexagon shape in comparison to square and triangle?
A	Largest area
B	Simple design
C	Small area
D	Single directional
Marks	1.5
Unit	2

Id	103
Question	Which type of antenna is used for center excited cells?
A	Dipole antenna
B	Grid antenna
C	Sectored antenna
D	Omnidirectional antenna
Marks	1.5
Unit	2

Id	104
Question	Which type of antenna is used for edge excited cells?
A	Omnidirectional antenna
B	Grid antenna
C	Sectored directional antenna
D	Dipole antenna
Marks	1.5
Unit	2

Id	105
Question	For a cellular system, if there are N cells and each cell is allocated k channel. What is the total number of available radio channels, S?
A	$S=k*N$
B	$S=k/N$
C	$S=N/k$
D	$S=kN$
Marks	1.5
Unit	2

Id	106
Question	What is a cluster in a cellular system?
A	Group of frequencies
B	Group of cells
C	Group of subscribers
D	Group of mobile systems
Marks	1.5
Unit	2

Id	107
Question	What is a frequency reuse factor for N number of cells in a system?
A	N
B	N^2
C	$2*N$
D	$1/N$
Marks	1.5
Unit	2

Id	108
Question	Capacity of a cellular system is directly proportional to _____
A	Number of cells
B	Number of times a cluster is replicated
C	Number of Base stations
D	Number of users
Marks	1.5
Unit	2

Id	109
Question	What is the condition for handoff?
A	A mobile moves into a different cell while in conversation
B	A mobile remains in the same cell while in conversation
C	A mobile moves to different cell when idle
D	A mobile remains in the same cell and is idle
Marks	1.5
Unit	2

Id	110
Question	Handoff does not require voice and control channel to be allocated to channels associated with the new base station.
A	a) True
B	b) False
C	
D	
Marks	1.5
Unit	2

Id	111
Question	The time over which a call can be maintained within a cell without handoff is called _____
A	Run time
B	Peak time
C	Dwell time
D	Cell time
Marks	1.5
Unit	2

Id	112
Question	Dwell time does not depend on which of the following factor?
A	Propagation
B	Interference
C	Distance between subscriber and base station
D	Mobile station
Marks	1.5
Unit	2

Id	113
Question	Which of the following is associated with the handoff in first generation analog cellular systems?
A	Locator receiver
B	MAHO
C	Cell dragging
D	Breathing cell
Marks	1.5
Unit	2

Id	114
Question	MAHO stands for _____
A	MSC assisted handoff
B	Mobile assisted handoff
C	Machine assisted handoff
D	Man assisted handoff
Marks	1.5
Unit	2

Id	115
Question	A handoff is initiated when the power received from the base station of a neighbouring cell falls behind the power received from the current base station by certain level.
A	True
B	False
C	
D	
Marks	1.5
Unit	2

Id	116
Question	What is the condition for intersystem interference?
A	Mobile moves from one cell to another cell
B	Mobile remains in the same cell
C	Mobile moves from one cellular system to another cellular system
D	Mobile remains in the same cluster
Marks	1.5
Unit	2

Id	117
Question	What is the disadvantage of guard channel?
A	Efficient utilization of spectrum
B	Cross talk
C	Near far effect
D	Reduce total carried traffic
Marks	1.5
Unit	2

Id	118
Question	Which of the following priority handoff method decrease the probability of forced termination of a call due to lack of available channels?
A	Queuing
B	Guard channel
C	Cell dragging
D	Near far effect
Marks	1.5
Unit	2

Id	119
Question	Umbrella cell approach is possible by using _____
A	Antenna of same heights
B	Antenna of different heights
C	Different voice channels
D	Different control channels
Marks	1.5
Unit	2

Id	120
Question	Cell dragging is a problem occur due to _____
A	Pedestrian users
B	Stationary users
C	High speed mobile systems
D	Base stations having same frequency
Marks	1.5
Unit	2

Id	121
Question	What was the typical handoff time in first generation analog cellular systems?
A	1 second
B	10 seconds
C	1 minute
D	10 milliseconds
Marks	1.5
Unit	2

Id	122
Question	How much time it takes for handoff in digital cellular systems like GSM?
A	1 second
B	10 seconds
C	1 minute
D	10 milliseconds
Marks	1.5
Unit	2

Id	123
Question	Soft handoff is also known as _____
A	MAHO
B	Hand over
C	Break before make
D	Make before break
Marks	1.5
Unit	2

Id	124
Question	What is the concept for accommodating a large number of users in a limited radio spectrum?
A	Grade of service
B	Trunking
C	Multiplexing
D	Multitasking
Marks	1.5
Unit	2

Id	125
Question	On termination of call, the occupied channel is not returned to the pool of available channels in trunking.
A	True
B	False
C	
D	
Marks	1.5
Unit	2

Id	126
Question	In trunking system, when the channel is already in use, the call is blocked or queued.
A	True
B	False
C	
D	
Marks	1.5
Unit	2

Id	127
Question	Who developed the fundamental of trunking theory?
A	Newton
B	Ohm
C	Erlang
D	Einstein
Marks	1.5
Unit	2

Id	128
Question	What is the unit for the measure of traffic intensity?
A	Meters
B	Henry
C	Ohm
D	Erlang
Marks	1.5
Unit	2

Id	129
Question	One Erlang represents _____
A	One call- hour per hour
B	One call-minute per hour
C	One call- hour per minute
D	Many calls- hour per hour
Marks	1.5
Unit	2

Id	130
Question	What is the measure of the ability of user to access a trunked system during the busiest hour?
A	Trunking
B	Grade of Service (GOS)
C	Multiplexing
D	Sectoring
Marks	1.5
Unit	2

Id	131
Question	GOS is typically given as a likelihood that a _____
A	Call is in progress
B	Channels are busy
C	Call is blocked
D	Channel are free
Marks	1.5
Unit	2

Id	132
Question	The time requires to allocate a trunked radio channel to a requesting user is called _____
A	Dwell time
B	Holding time
C	Run time
D	Set up Time
Marks	1.5
Unit	2

Id	133
Question	Average duration of a typical call is called _____
A	Holding time
B	Dwell time
C	Set up time
D	Run time
Marks	1.5
Unit	2

Id	134
Question	The average number of call requests per unit time is also known as _____
A	Request rate
B	Load
C	Grade o Service
D	Traffic intensity
Marks	1.5
Unit	2

Id	135
Question	Traffic intensity offered by each user is the product of _____
A	Set up time and holding time
B	Call request rate and holding time
C	Load and holding time
D	Call request rate and set up time
Marks	1.5
Unit	2

Id	136
Question	AMPS cellular system is designed for a GOS of _____ blocking.
A	10%
B	50 %
C	2%
D	1%
Marks	1.5
Unit	2

Id	137
Question	Blocked calls cleared formula is also known as _____ formula.
A	Erlang C
B	Erlang A
C	Erlang D
D	Erlang B
Marks	1.5
Unit	2

Id	138
Question	Blocked calls delayed formula is also known as _____
A	Erlang A
B	Erlang B
C	Erlang C
D	Erlang D
Marks	1.5
Unit	2

Id	139
Question	Which of the following techniques do not help in expanding the capacity of cellular system?
A	Sectoring
B	Scattering
C	Splitting
D	Microcell zone concept
Marks	1.5
Unit	2

Id	140
Question	_____ uses directional antennas to control interference.
A	Sectoring
B	Cell splitting
C	Repeaters
D	Micro cell zone concept
Marks	1.5
Unit	2

Id	141
Question	_____ allows an orderly growth of cellular system.
A	Sectoring
B	Scattering
C	Cell splitting
D	Micro cell zone technique
Marks	1.5
Unit	2

Id	142
Question	Which of the following technology distributes the coverage of the cell and extends the cell boundary to hard-to-reach places?
A	Cell splitting
B	Scattering
C	Sectoring
D	Micro cell zone concept
Marks	1.5
Unit	2

Id	143
Question	Which of the following increases the number of base stations in order to increase capacity?
A	Cell splitting
B	Sectoring
C	Repeaters
D	Micro cell zone concept
Marks	1.5
Unit	2

Id	144
Question	Which of the following trunking inefficiencies?
A	Cell splitting
B	Micro cell zone technique
C	Sectoring
D	Repeaters
Marks	1.5
Unit	2

Id	145
Question	The process of subdividing a congested cell into smaller cells is called _____
A	Cell splitting
B	Sectoring
C	Micro cell technique
D	Repeaters
Marks	1.5
Unit	2

Id	146
Question	Cell splitting increases the capacity of a cellular system since it increases the number of times _____ are reused.
A	Cells
B	Channels
C	Transmitters
D	Mobile stations
Marks	1.5
Unit	2

Id	147
Question	Cell splitting do not maintain the minimum c-channel reuse ratio.
A	True
B	False
C	
D	
Marks	1.5
Unit	2

Id	148
Question	Which of the following technique is used to limit radio coverage of newly formed microcells?
A	Sectoring
B	Splitting
C	Antenna downtilting
D	Scattering
Marks	1.5
Unit	2

Id	149
Question	Sectoring increases SIR (Signal to Interference Ratio).
A	True
B	False
C	
D	
Marks	1.5
Unit	2

Id	150
Question	Which of the following has range extension capability?
A	Sectoring
B	Repeaters
C	Scattering
D	Micro cell zone concept
Marks	1.5
Unit	2

Id	151
Question	Repeaters has one drawback of reradiating _____
A	Frequency
B	Channels
C	Power
D	Repeater noise and interference
Marks	1.5
Unit	2

Id	152
Question	Which of the following is not an advantage of micro cell zone technique?
A	Reduced co channel interference
B	Improved signal quality
C	Increase in capacity
D	Increasing number of base stations
Marks	1.5
Unit	2

Id	153
Question	In a micro cell zone concept, when a mobile travels from one zone to another within the cell, it retains the same _____
A	Power level
B	Base station
C	Channel
D	Receiver
Marks	1.5
Unit	2

Id	154
Question	US digital cellular system based on CDMA was standardized as _____
A	IS-54
B	IS-136
C	IS-95
D	IS-76
Marks	1.5
Unit	3

Id	155
Question	IS-95 was not compatible with existing AMPS frequency band.
A	True
B	False
C	
D	
Marks	1.5
Unit	3

Id	156
Question	Which of the following is used by IS-95?
A	DSSS
B	FHSS
C	THSS
D	Hybrid
Marks	1.5
Unit	3

Id	157
Question	Each IS-95 channel occupies _____ of spectrum on each one way link.
A	1.25 MHz
B	1.25 kHz
C	200 kHz
D	125 kHz
Marks	1.5
Unit	3

Id	158
Question	IS-95 uses same modulation technique for forward and reverse channel.
A	True
B	False
C	
D	
Marks	1.5
Unit	3

Id	159
Question	IS-95 is specified for reverse link operation in _____ band.
A	869-894 MHz
B	849-894 MHz
C	849-869 MHz
D	824-849 MHz
Marks	1.5
Unit	3

Id	160
Question	User data in IS-95 is spread to a channel chip rate of _____
A	1.2288 Mchip/s
B	9.6 Mchip/s
C	12.288 Mchip/s
D	0.96 Mchip/s
Marks	1.5
Unit	3

Id	161
Question	_____ are used to resolve and combine multipath components.
A	Equalizer
B	Registers
C	RAKE receiver
D	Frequency divider
Marks	1.5
Unit	3

Id	162
Question	CT2 was the first generation of cordless telephones.
A	True
B	False
C	
D	
Marks	1.5
Unit	3

Id	163
Question	CT2 is analog version of first generation cordless telephones.
A	True
B	False
C	
D	
Marks	1.5
Unit	3

Id	164
Question	In CDMA spread spectrum systems, chip rate is less than the bandwidth of the channel.
A	True
B	False
C	
D	
Marks	1.5
Unit	3

Id	165
Question	A RAKE receiver collects the _____ versions of the original signal.
A	Time shifted
B	Amplitude shifted
C	Frequency shifted
D	Phase shifted
Marks	1.5
Unit	3

Id	166
Question	RAKE receiver uses separate _____ to provide the time shifted version of the signal.
A	IF receiver
B	Equalizer
C	Correlation receiver
D	Channel
Marks	1.5
Unit	3

Id	167
Question	Each correlation receiver in RAKE receiver is adjusted in _____
A	Frequency shift
B	Amplitude change
C	Phase shift
D	Time delay
Marks	1.5
Unit	3

Id	168
Question	The range of time delays that a particular correlator can search is called _____
A	Search window
B	Sliding window
C	Time span
D	Dwell time
Marks	1.5
Unit	3

Id	169
Question	2G network uses _____signals
A	Analog
B	Digital
C	sample
D	None of the above
Marks	1.5
Unit	1

Id	170
Question	The range of time delays that a particular correlator can search is called _____
A	Search window
B	Sliding window
C	Time span
D	Dwell time
Marks	1.5
Unit	3

Id	171
Question	RAKE receiver is used for _____ technique.
A	CDMA
B	TDMA
C	FDMA
D	OFDM
Marks	1.5
Unit	3

Id	172
Question	A RAKE receiver uses _____ to separately detect the M strongest signals.
A	Single correlator
B	Multiple correlator
C	Single IF receiver
D	Multiple IF receivers
Marks	1.5
Unit	3

Id	173
Question	In a RAKE receiver, if the output from one correlator is corrupted by fading, all the other correlator's output are also corrupted.
A	a) True
B	b) False
C	
D	
Marks	1.5
Unit	3

Id	174
Question	A RAKE receiver uses _____
A	Equalization
B	Channel coding
C	Diversity
D	Encryption
Marks	1.5
Unit	3

Id	175
Question	Interleaving is used to obtain _____ diversity.
A	Time
B	Frequency
C	Polarization
D	Antenna
Marks	1.5
Unit	3

Id	176
Question	OFDMA stands for _____
A	omnidirectional frequency division multiple access
B	orthogonal frequency duplex multiple access
C	orthogonal frequency divider multiple access
D	orthogonal frequency division multiple access
Marks	1.5
Unit	3

Id	177
Question	Why is a cyclic prefix required in an OFDMA?
A	To ensure symbol time is an integer number
B	To help overcome multipath and ISI
C	To maintain orthogonality
D	To make OFDMA scalable
Marks	1.5
Unit	3

Id	178
Question	What does the DC subcarrier indicate?
A	Identity of the cell
B	Antenna configuration
C	Center of OFDM channel
D	Format of data channel
Marks	1.5
Unit	3

Id	179
Question	What processing step combines multiple OFDM subcarriers into a single signal for transmission?
A	FFT
B	IFFT
C	RF combining
D	Channel mapping
Marks	1.5
Unit	3

Id	180
Question	. Which property of OFDMA system allows adjacent subcarriers to be used without interference?
A	Orthogonality
B	Orthodoxy
C	Octagonality
D	Originality
Marks	1.5
Unit	3

Id	181
Question	In OFDMA, what is the relationship between the subcarrier spacing f and symbol time t ?
A	$f=t$
B	$f=1/2t$
C	$f=1/t$
D	no relation
Marks	1.5
Unit	3

Id	182
Question	OFDM is a technique for 3G mobile communication.
A	True
B	False
C	
D	
Marks	1.5
Unit	3

Id	183
Question	OFDM uses complex equalizers.
A	True
B	False
C	
D	
Marks	1.5
Unit	3

Id	184
Question	When we divide band of Orthogonal Frequency Division Multiplexing (OFDM) into sub bands, it diminishes effects of _____
A	noise
B	collision
C	interference
D	signals absence
Marks	1.5
Unit	3

Id	185
Question	Common data rates of IEEE 802.11 OFDM are _____
A	18 Mbps
B	200 Mbps
C	50 Mbps
D	54 Mbps
Marks	1.5
Unit	3

Id	186
Question	The PN sequence length is
A	10
B	12
C	15
D	18
Marks	1.5
Unit	3

Id	187
Question	The chip duration of PN sequence is
A	1 μ s
B	0.1 μ s
C	0.1 ms
D	1 ms
Marks	1.5
Unit	3

Id	188
Question	The period of PN sequence is
A	1.5 μ s
B	15 μ s
C	6.67 ns
D	0.67 ns
Marks	1.5
Unit	3

Id	189
Question	Power delay profile is represented as plots of _____ with respect to fixed time delay reference.
A	Relative received power
B	Frequency
C	Transmitted power
D	Relative power
Marks	1.5
Unit	3

Id	190
Question	Which of the following is not a multipath channel parameter that can be determined from power delay profile?
A	Mean excess delay
B	RMS delay spread
C	Excess delay spread
D	Doppler spread
Marks	1.5
Unit	3

Id	191
Question	The time dispersive properties of wideband multipath channel are quantified by _____ and _____
A	Mean excess delay, rms delay spread
B	Doppler spread, rms delay spread
C	Doppler spread, coherence time
D	Mean excess delay, Doppler spread
Marks	1.5
Unit	3

Id	192
Question	_____ is the square root of the second central moment of the power delay profile.
A	Mean excess delay
B	Rms delay spread
C	Excess delay spread
D	Coherence time
Marks	1.5
Unit	3

Id	193
Question	Which of the following is the first moment of the power delay profile?
A	Rms delay spread
B	Excess delay spread
C	Mean excess delay
D	Doppler spread
Marks	1.5
Unit	3

Id	194
Question	What is the order of typical values of rms delay spread in outdoor mobile radio channels?
A	Microseconds
B	Nanoseconds
C	Seconds
D	Minutes
Marks	1.5
Unit	3

Id	195
Question	Power delay profile and magnitude frequency response of a mobile radio channel are related through _____
A	Laplace Transform
B	Fourier Transform
C	S Transform
D	Wavelet Transform
Marks	1.5
Unit	3

Id	196
Question	_____ and coherence bandwidth are inversely proportional to one another.
A	Rms delay spread
B	Mean excess delay
C	Excess delay spread
D	Doppler spread
Marks	1.5
Unit	3

Id	197
Question	Coherence bandwidth is a statistical measure of range of frequencies over which channel is considered _____
A	Time dispersive
B	Frequency selective
C	Time variant
D	Flat
Marks	1.5
Unit	3

Id	198
Question	Which of the following describes time varying nature of the channel in a small scale region?
A	Delay spread and coherence time
B	Coherence bandwidth and delay spread
C	Doppler spread and coherence time
D	Delay spread and doppler spread
Marks	1.5
Unit	3

Id	199
Question	Doppler spread is a range of frequencies over which received Doppler spread is _____
A	Zero
B	Non zero
C	Infinite
D	One
Marks	1.5
Unit	3

Id	200
Question	_____ is a statistical measure of time duration over which channel impulse response is invariant.
A	Coherence time
B	Doppler spread
C	Mean excess delay
D	Rms delay spread
Marks	1.5
Unit	3

