

Program: **BE Electronics & Telecommunication Engineering**

Curriculum Scheme: **Revised 2016**

Examination: Final Year Semester VII

Course Code: **ECC702** and Course Name: **Mobile Communication Systems**

Time: 1 hour

Max. Marks: 50

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Note to the students:- All the Questions are compulsory and carry equal marks .

Q1.	What is blocked call delay system?
Option A:	If a channel is not available immediately, the call request may be delayed until a channel becomes available.
Option B:	It is defined as the measure of the ability of a user to access a trunked system during the busiest hour.
Option C:	The interference between the signals from channel cells.
Option D:	If a channel is not available immediately, the call request is blocked.
Q2.	Calculate the frequency reuse ratio Q for cell radius 0.7 km and it is separated from co-channel cell by a distance of 6 km.
Option A:	8.45
Option B:	8.57
Option C:	8.9
Option D:	9
Q3.	As the distance between two co-channel cells increases
Option A:	SIR Increases
Option B:	SIR Decreases
Option C:	SIR remains same
Option D:	No relation between SIR and distance between co-channel cells.
Q4.	What is frequency reuse?
Option A:	Process of selecting and allocating channel groups to BS
Option B:	Process of selection of mobile users
Option C:	Process of selecting frequency of mobile equipment
Option D:	Process of selection of number of cells
Q5.	Consider a base-station transmitter operating at 900 MHz carrier frequency. For a mobile moving at a speed of 20 m/s, calculate the received carrier frequency if the mobile is moving in a direction perpendicular to the direction of arrival of the transmitted signal.
Option A:	900.00006MHz

Option B:	899.99994MHZ
Option C:	900.00003MHz
Option D:	900MHz
Q6.	In free space transmission, the signal attenuation increases _____
Option A:	proportionally with distance
Option B:	proportionally with the square distance
Option C:	proportionally with distance cube
Option D:	inversely proportional with distance
Q7.	A wireless communication transmitter has an RF power of 10 W and Tx antenna gain of 3 dB. The EIRP is _____
Option A:	10W
Option B:	20W
Option C:	30W
Option D:	40W
Q8.	In which of the following multiple access technique, the whole BW is utilized simultaneously by all the users.
Option A:	TDMA
Option B:	FDMA
Option C:	DSSS
Option D:	OFDMA
Q9.	The frame period of one TDMA frame in GSM standard is
Option A:	577 μ s
Option B:	3.692 μ s
Option C:	4.615 ms
Option D:	120 ms
Q10.	_____ is a bi-directional channel which is used for exchange of time critical information like Handoff between mobile and base station during the progress of a call.
Option A:	SDCCH
Option B:	FACCH
Option C:	SACCH
Option D:	FOCCH
Q11.	Use of _____ decreases the possibility of losing whole bursts during the transmission, due to sudden fades.
Option A:	speech coding
Option B:	ciphering
Option C:	interleaving
Option D:	channel coding
Q12.	Which of the following is teleservice offered by GSM?

Option A:	call hold
Option B:	call waiting
Option C:	call barring
Option D:	SMS
Q13.	Data rate upto 150 kbps is achieved using
Option A:	HSCSD
Option B:	GPRS
Option C:	EDGE
Option D:	UMTS
Q14.	In soft handoff mobile station will communicate multiple base stations simultaneously for short before deciding a final candidate. This is possible because of _____
Option A:	Multipath Receiver
Option B:	Frame Receiver
Option C:	Soft Receiver
Option D:	Rake receiver
Q15.	Reverse channels in IS-95 are
Option A:	Access channel and Traffic Channel
Option B:	Synchronisation channel and Traffic Channel
Option C:	Access channel and paging channel
Option D:	Paging channel and Traffic Channel
Q16.	Channel that can be found only in the downlink, which is used to tell an MS about an incoming call in W-CDMA is known as
Option A:	Broadcast Channel
Option B:	Paging Channel
Option C:	Random Access Channel
Option D:	Forward Access Channel
Q17.	Node B in UMTS architecture stands for
Option A:	Radio Network Subsystem
Option B:	Radio Network Controller
Option C:	Core Network
Option D:	Radio Base Station
Q18.	Using _____ in CDMA 2000 provide higher data rates for data application, wider bandwidth and better voice quality.
Option A:	Fast power control
Option B:	Multicarrier modulation
Option C:	Cell sectorization
Option D:	Outer loop power control
Q19.	The fundamental time unit of LTE transmission is a radio frame, which has a

	duration of
Option A:	1 ms
Option B:	5 ms
Option C:	10 ms
Option D:	20 ms
Q20.	Modulation used in LTE is
Option A:	BPSK
Option B:	QPSK
Option C:	GMSK
Option D:	OFDM
Q21.	A RAKE receiver uses _____
Option A:	Equalization
Option B:	Channel coding
Option C:	Diversity
Option D:	Encryption
Q22.	Which organization is responsible for developing LTE standards?
Option A:	UMTS
Option B:	3GPP
Option C:	3GPP2
Option D:	ISO
Q23.	In MIMO which factor has greatest influence on data rate?
Option A:	The size of antenna
Option B:	The height of antenna
Option C:	The number of transmit antenna
Option D:	The area of receive antenna
Q24.	How is bandwidth increased in Cdma2000?
Option A:	Clubbing adjacent radio channels
Option B:	Changing the hardware of base stations
Option C:	Change of spectrum
Option D:	Change of RF equipment
Q25.	MIMO technology makes advantage of a natural radio wave phenomenon called _____
Option A:	Reflection
Option B:	Multipath
Option C:	Refraction
Option D:	Diffraction
