University of Mumbai

Examinations Commencing from 7th January 2021 to 20th January 2021

Curriculum Scheme: Rev2016

Examination: BE Semester VII

Course Code: CSC702 and Course Name: Mobile communication and Computing

Time: 2 hour Max. Marks: 80

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Q1.	**Choose the correct option for following questions. All the Questions are compulsory and carry equal marks**
Q1.	The 2G GSM technology uses a carrier separation of
Option A:	1.25 MHz
Option B:	200 KHz
Option C:	30 KHz
Option D:	300 KHz
Q2.	In direct sequence process which step is performed first?
Option A:	De-spreading
Option B:	Demodulation
Option C:	Dispreading & Demodulation
Option D:	Desperation
Q3.	Fading of the received radio signals in a mobile communication environment occurs because of .....
Option A:	Direct propagation
Option B:	Multipath Propagation
Option C:	Bi-path Propagation
Option D:	Tri-path propagation
Q4.	In a GSM architecture, which system provides Authentication and Encryption services?
Option A:	HLR
Option B:	VLR
Option C:	EIR
Option D:	AUC
Q5.	A UMTS(Universal Mobile Telecommunication) network is a____network.
Option A:	First Generation
Option B:	Second Generation
Option C:	Third Generation
Option D:	Fourth Generation
Q6.	What is the maximum data rate supported by a 3G network or UMTS network?
Option A:	384 kbps
Option B:	2 Mbps
Option C:	32 Mbps
Option D:	42 Mbps

Q7.	As part of Closed Loop Power Control followed by a WCDMA network, power control bits are sent every___milliseconds to the User Equipment (Phones).
Option A:	0.1 ms
Option B:	0.66 ms
Option C:	1.5 ms
Option D:	2.58 ms
Q8.	Who developed standards for a UMTS network?
Option A:	ANSI (American National Standards Institute)
Option B:	3GPP (3rd Generation Partnership Project)
Option C:	ITU (International Telecommunication Union)
Option D:	IEEE
Q9.	The DoD model (also called the TCP/IP stack) has four layers. Which layer of the DoD model is equivalent to the Network layer of the OSI model?
Option A:	Application
Option B:	Host to Host
Option C:	Internet
Option D:	Network Access
Q10.	A set that makes stationary or mobile wireless station and also have optional central base station is known as _____
Option A:	Basic service set
Option B:	Extended service set
Option C:	Network point set
Option D:	Access point
Q11.	Which of the following internet layer protocols of TCP/IP is used for wireless communication?
Option A:	Mobile IP
Option B:	IP
Option C:	TCP
Option D:	UDP
Q12.	What is the condition for handoff?
Option A:	A mobile move into a different cell while in conversation
Option B:	A mobile remains in the same cell while in conversation
Option C:	A mobile move to different cell when idle
Option D:	A mobile remains in the same cell and is idle
Q13.	Which of the following priority handoff method decrease the probability of forced termination of a call due to lack of available channels?
Option A:	Queuing
Option B:	Guard channel
Option C:	Cell dragging
Option D:	Near far effect
Q14.	Bluetooth uses _____
Option A:	frequency hopping spread spectrum

Option B:	orthogonal frequency division multiplexing
Option C:	time division multiplexing
Option D:	channel division multiplexing
Q15.	In a piconet, there can be up to_____parked nodes in the network.
Option A:	63
Option B:	127
Option C:	255
Option D:	511
Q16.	Bluetooth transceiver devices operate in____band.
Option A:	2.4 GHz ISM
Option B:	2.5 GHz ISM
Option C:	2.6 GHz ISM
Option D:	2.7 GHz ISM
Q17.	Which of the following WLAN standard has been named Wi-Fi?
Option A:	IEEE 802.6
Option B:	IEEE 802.15.4
Option C:	DSSS IEEE 802.11b
Option D:	IEEE 802.11g
Q18.	Which of the following standard committee specifies Bluetooth and other Personal Area Networks (PAN)?
Option A:	IEEE 802.11b
Option B:	IEEE 802.15
Option C:	IEEE 802.11g
Option D:	IEEE 802.16
Q19.	Multi-Layer Mobility Management using Hybrid SIP provide mobility in following layer
Option A:	Network layer
Option B:	Data link layer
Option C:	Application layer
Option D:	Transport layer
Q20.	_____Protocol is employed to line up the net phone, phone calls, video conferencing and alternative transmission connections.
Option A:	SIP
Option B:	VoIP
Option C:	IP
Option D:	Mobile IP.

Q2	**Solve any Two Questions out of Three** **10 marks each**
A	Explain GSM System Architecture in details
B	Compare 3G,4G & 5G Mobile Communication Technologies
C	Explain the need of specialized MAC in wireless communication.

Q3	**Solve any Two Questions out of Three** **10 marks each**
A	Compare & Contrast HIPERLAN 1 and HIPERLAN 2
B	Explain different components used in LTE architecture with diagram
C	Explain various nodes present in E-UTRAN architecture.