

END SEMESTER EXAMINATION, 2020

Semester: 6th

Subject code: CO-601(NEW)

Subject: Mobile Computing

Full Marks: = 70

Duration: 3 hours

Instructions: 1. Questions on Part A are compulsory

2. Answer any five questions from Part B

PART-A , MARKS-25		
	Questions	Marks
1	Fill in the blanks: a. SGSN stands for ____ b.manages the switching function in GSM. c. A satellite signal transmitted from a satellite transponder to earth's station is..... d. Preamble contains..... e. is the maximum number of channels that can be provided in a fixed frequency band. f. Cluster in a cellular system is..... g. Soft handoff is also known as..... h. The process of subdividing a congested cell into smaller cells is called.... i. Neighbouring stations are assigned different group of channels in cellular system to..... j. Android is developed by.....	1x10=10
2	Write true or false: a. NSS supports operation and maintenance of GSM b. Repeaters inside communication satellite are called Transponders. c. Bandwidth of FDMA channel is narrow. d. Cell splitting does not increase the capacity of the cellular system. e. Capacity of a cellular system is directly proportional to number of times a cluster is replicated. f. Android is based on Linux for security, portability and networking. g. Reason for adopting hexagon shape in comparison to square and triangle is largest area. h. Kernel level security is not provided in Android. i. GSM is the world's first cellular system to specify digital modulation and network level architecture. j. SCTP protocol transfer packets in a GPRS core network.	1x10=10
3	Choose the correct answer a. Which does not come under subsystem of GSM architecture? i) NSS ii) OSS iii) BSS iv) Channels b. Which stores information like subscriber's identification number? i) SMS ii) SIM iii) ME iv) Registers c. Which increases number of base station to increase the capacity? i) Cell splitting ii) Sectoring iii) Repeaters iv) Scattering d. Frequency reuse factor for n number of cells in a system is..... i) n ii) n ² iii) 2n iv) 1/n e. Which is not a standard of 3G ?	1x5=5



	i) UMTS iii) TD-SCDMA	ii) Cdma2000 iv) LTE	
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PART-B, MARK- 45		
	Questions	Marks
4	(a) Define Mobile Computing. What are its advantages & disadvantages? (b) What are the challenges in Mobile Communication? Or, Explain various applications of Mobile Computing.	1+4=5 4
5	(a) Explain packet delivery mechanism in mobile IP network with suitable diagram. Or, Explain Architecture of Mobile Computing. (b) What are the functions of Gateway GPRS Support node (GGSN)? (c) Explain purpose of the following... i) Home Location Register ii) VLR	5 2 2
6	(a) List three important features of GSM security. (b) Define Handoff. Write in details about various types of handover in GSM. What are the reasons for handover?	3 1+3+2=6
7	(a) Explain GPRS and its protocol architecture. (b) Define basic principles of designing Android Applications. (c) What is frequency reuse of uplink and downlink in GSM architecture?	5 2 2
8	(a) Write short notes on Android SDK. (b) Explain Android software stack with neat diagram. Or, Explain Android platform with its features.	4 5
9	(a) Describe GSM architecture and its services in details. (b) What information is stored in SIM? (c) What is encapsulation in mobile IP?	5 2 2
10	Write short notes on any three: a) Compare the characteristics of CDMA, FDMA, TDMA Or, Different modes for Mobile communication b) Security services of GSM c) Advantages of GPRS over GSM Or Services of GPRS d) Different Generations of wireless networks e) Mobile communication via satellite	3*3=9

