DF-1665
M. Sc. (ICT) (Sem. III) Examination
March / April - 2016
Advance Wireless Communication

Time : 3 Hours] [Total Marks : 70

Instruction :

Q.1 Answer the following questions (16)
Q.1 (A) Answer the following questions (Any Three) (06)

1) Explain hand-off process in satellite communication.
2) List out IR communication merits and demerits.
3) Write main advantages of WLL Telecommunication system.
4) What is the use of IMSI and TMSI number in GSM system?

Q.1 (B) Answer the following questions (Any two) (10)

1) Write short note on 4-G mobile technology.
2) Write short note on Authentication and Encryption process in GSM.
3) Explain Geostationary Earth Orbit (GEO) and Medium Earth Orbit (MEO) and Low Earth Orbit (LEO) for satellite communication.

Q.2 Answer the following questions (Any six) (18)

1) Draw iridium satellite architecture and explain earth station functionality.
2) What is fading? Explain RAKE receiver functionality to minimize fading in CDMA.
3) Draw WLL architecture and list out different type of WLL systems.
4) Explain personal and equipment mobility.
5) Explain soft hand-off concept of CDMA system.
6) Explain feildbus communication in detail.
7) Draw GPRS backbone architecture and explain GGSN and border gateway functionality.
Q.3. Answer the following questions

Q.3.(A) Write True or False for following sentences

1) Class-B mobile station (MS) device can attach for either GPRS or GSM services at a time.
2) WLL is providing radio communication in the local loop.
3) Smart antenna technology use for 4-G mobile communications.
4) Total active 14 satellites available in 7 planes in Globalstar satellite system.

Q.3.(B) Answer the following questions (Any two)

1) Draw GPRS architecture block diagram and explain EIR, SGSN, and HLR units functionality.
2) Write short note on Bluetooth stack.
3) Explain functionality of signaling channels
   1) Broadcast Channel (BCCH)
   2) Common Control Channel (CCCH)
   3) Dedicated/Associated Control Channel (DCCH/ACCH)

   to establish air interface communication in GSM system.

Q.4. Answer the following questions

Q.4.(A) Answer the following questions (Any four)

1) How many years life time consider for global star satellites?
2) Write Walsh code number of paging channel in CDMA.
3) Write full form of RPCU unit in WLL system.
4) List out wireless sensor network applications.
5) Discuss how CDMA frequency allocation mechanism is different compare to GSM frequency allocations mechanism.

Q.4.(B) Answer the following questions (Any two)

1) Explain RFID working concept and describe its utility for departmental store management.
2) Write short note on power control process in CDMA technology.