

BE11-R4: WIRELESS & MOBILE COMMUNICATION

NOTE:

1. Answer question 1 and any FOUR from questions 2 to 7.
2. Parts of the same question should be answered together and in the same sequence.

Time: 3 Hours

Total Marks: 100

1.

- a) What is Time division multiple access method? Write various characteristics of it.
- b) Explain in brief on Local area, Routing area and Tracking area in respect of Mobility management.
- c) Draw GSM protocol stack diagram and explain in brief.
- d) Write and explain in brief on various qualities of service standards for 3G public cellular mobile telephone service.
- e) Write merits and limitations of Bluetooth and Wi-Fi.
- f) What is Wireless local loop (WLL)? Write advantages of WLL over traditional wire-line connectivity.
- g) Write and explain in brief on the key features of Palm OS

(7x4)

2.

- a) Explain LAN, MAN and WAN with appropriate suitable Network topologies.
- b) What is small scale fading and multipath fading in Radiopropagation? Write and explain in brief on various factors affecting small scale and multipath fading.
- c) Explain, how packet switched strategy is better than circuit switched strategy.

(6+9+3)

3.

- a) Write and explain in brief on various components of GPRS Architecture.
- b) What is Code division multiple access (CDMA)? Explain asynchronous CDMA and write its advantages over synchronous CDMA.

(9+9)

4.

- a) Write and explain in brief on any FOUR types of Wireless transmission media.
- b) What is hidden terminal problem? Write and explain in brief on any THREE solutions to solve the problem.

(9+9)

5.

- a) Draw the WiMax Protocol Stack diagram and explain in detail on each layer in it.
- b) What is IEEE 802.11 standard? Write and explain at least FOUR IEEE 802.11 family standards with their applications.

(9+9)

6.

- a) Write and explain various speech coding techniques and their functionalities.
- b) Explain on SMS security threats and corresponding preventive measures.
- c) Write in brief on any TWO Mobile ad-hoc routing methods.

(6+6+6)

7. Write short notes on the following:

- a) Digital enhanced cordless telecommunications system (DECT)
- b) Frequency Hopping Spread Spectrum technology (FHSS)
- c) Embedded JAVA and its Applications
- d) 5G mobile Networks

(5+5+4+4)