



10MT841

Eighth Semester B.E. Degree Examination, June/July 2023
Wireless Communication

Time: 3 hrs.

Max. Marks:100

Note: Answer any FIVE full questions, selecting at least TWO full questions from each part.

PART – A

- 1 a. Discuss the evolution of wireless radio systems. (10 Marks)
b. Discuss the characteristics of 1G, 2G, 3G and 4G networks. (10 Marks)
- 2 a. Draw the neat sketch of block diagram of common cellular system and explain the Base Station System (BSS) components. (10 Marks)
b. Explain a mobile originated call in a cellular network with a neat flow diagram. (10 Marks)
- 3 a. Explain mobility management for the following:
i) Location management
ii) Location updating. (10 Marks)
b. Describe the cell fundamentals in detail. (10 Marks)
- 4 a. With a neat GSM network architecture, explain the Network Switching System (NSS). (10 Marks)
b. Draw and describe the structure of TDMA frame, multiframe, superframe and hyperframe. Specify their time lengths. (10 Marks)

PART – B

- 5 a. Explain with neat diagrams GSM Inter-MSC handover and Intra-BSC handover. (10 Marks)
b. What is Location Area (LA) in a cellular system? What is location updating? Explain the basic steps involved in location updating (Idle Mode). (10 Marks)
- 6 a. Write explanatory notes on :
i) IS – 95 CDMA forward channels
ii) IS – 95 CDMA (10 Marks)
b. Describe CDMA system operation supporting TEM different forms of registration. (10 Marks)
- 7 a. Discuss various coding techniques used in wireless communication. (10 Marks)
b. Discuss various pathless models. (10 Marks)
- 8 a. Explain the following :
i) WPAN characteristics
ii) WPAN power levels and coverage area
iii) WPAN network lifespan. (10 Marks)
b. List the features of IEEE802.11x technologies. (10 Marks)

* * * * *

Important Note : 1. On completing your answers, compulsorily draw diagonal cross lines on the remaining blank pages.
2. Any revealing of identification, appeal to evaluator and /or equations written eg. 42-8=50, will be treated as malpractice.