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10TE82

Eighth Semester B.E. Degree Examination, Jan./Feb. 2021

GSM

Time: 3 hrs.

Max. Marks:100

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

PART - A

- 1 a. Explain GSMPLMN with suitable block diagram. List its objectives and services. (10 Marks)
b. Calculate the number of channels available in GSM900 and GSM1800. (06 Marks)
c. Write a note on MS subsystem. (04 Marks)
- 2 a. List the radio link measurements used in GSM. Discuss the current techniques used in GSM to reduce interference. (12 Marks)
b. Write a note on Smart Antenna. (08 Marks)
- 3 a. With the help of flow chart, explain logical channel in GSM. (10 Marks)
b. Explain GSM frame structures with a neat diagram. (10 Marks)
- 4 a. Explain briefly the different attributes of speech coder. (12 Marks)
b. With a neat block diagram, explain time domain waveform coding. (08 Marks)

PART - B

- 5 a. Explain message flow diagram for call setup by mobile station. (10 Marks)
b. Describe intra-MSC handover in GSM. (10 Marks)
- 6 a. What are Wireless Security requirements? (08 Marks)
b. What are the security algorithms used in GSM? Explain them briefly. (06 Marks)
c. What is token based challenge? (06 Marks)
- 7 a. Describe the factors to be considered while designing a Wireless System. (08 Marks)
b. Write a note on teletraffic models. (06 Marks)
c. Explain the planning of a Wireless Network. (06 Marks)
- 8 a. What are the management requirements for wireless networks? Briefly explain. (08 Marks)
b. With a neat figure, explain how TMN architecture is used in the GSM network. (06 Marks)
c. Explain the different interfaces in TMN. (06 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.