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10MT841

Eighth Semester B.E. Degree Examination, Dec.2023/Jan.2024
Wireless Communication

Time: 3 hrs.

Max. Marks:100

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

PART – A

- 1 a. Explain with a neat diagram the network elements in SS7 signaling system. (10 Marks)
b. With a neat figure, discuss briefly AMPS system components and layout. (06 Marks)
c. Explain the characteristics of 2G cellular system. (04 Marks)
- 2 a. Explain the generation of MSISDN, IMSI and IMEI. (06 Marks)
b. Explain a Mobile Terminated call in a cellular Network with a neat flow diagram. (08 Marks)
c. Explain the function of RBS and BSC. (06 Marks)
- 3 a. Explain with neat diagrams the capacity. Expansion techniques in wireless networks. (12 Marks)
b. Explain the power control and power saving schemes in cellular systems. (08 Marks)
- 4 a. With suitable diagram, explain the GSM channel concept. (10 Marks)
b. Discuss the various dedicated control channels of GSM. (06 Marks)
c. Explain the concept of logical channels in GSM. (04 Marks)

PART – B

- 5 a. What is MSRN? Explain the formulation of GSM MSRN and call setup using MSRN. (10 Marks)
b. Explain Authentication and IMEI check number process with neat flow diagrams. (10 Marks)
- 6 a. Explain the Generation of pilot channel signal and paging channel signals. (10 Marks)
b. Discuss briefly the call Handoff in CDMA systems (10 Marks)
- 7 a. Explain convolution and Turbo encoders. (10 Marks)
b. Discuss briefly FHSS and DSSS. (10 Marks)
- 8 a. Explain the Bluetooth protocol stack with a neat figure. Also compare Bluetooth technology and OSI model. (12 Marks)
b. Explain the working of Independent basic service set Networks and Distribution system concepts. (08 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.