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10EC843

Eighth Semester B.E. Degree Examination, June/July 2016

GSM

Time: 3 hrs.

Max. Marks: 100

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

PART – A

- 1 a. Explain the objectives of GSM PLMN. (04 Marks)
- b. With neat diagram, explain GSM Reference model. (08 Marks)
- c. Explain Radio interface (MS to BTS) in GSM interfaces. (08 Marks)
- 2 a. Explain Smart Antenna and give their advantages. (08 Marks)
- b. Discuss about single level and quality level in GSM. (04 Marks)
- c. With neat diagram, explain base band frequency hopping in GSM. (08 Marks)
- 3 a. Explain the mobile identification process with flow diagram. (08 Marks)
- b. Explain GSM Location area and cell area identification process in GSM mobility management. (04 Marks)
- c. Write a note on synchronization Burst. (08 Marks)
- 4 a. Explain GSM PLMN Bearer services and Teleservices in detail. (08 Marks)
- b. Explain time domain waveform coding with help of A – Law and μ – Law. (12 Marks)

PART – B

- 5 a. What is hand over? Explain inter MSC hand over. (08 Marks)
- b. Explain mobile telephone Architecture for data interworking with neat block diagram. (06 Marks)
- c. Explain pure ALOHA scheme with their throughput. (06 Marks)
- 6 a. Explain various security algorithms for GSM in detail. (10 Marks)
- b. Explain the privacy Requirements in GSM security. (10 Marks)
- 7 a. Derive an expression for spectral efficiency in terms of voice and non voice transmission. (10 Marks)
- b. Derive an expression for Received signal strength of a base station Receiver. (10 Marks)
- 8 a. Explain the various TMN Layers in detail. (08 Marks)
- b. Explain the manager and agent roles in OSI system management. (08 Marks)
- c. Write short note on SNMP. (04 Marks)

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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.