

Seat
No.

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मध - 058

Telematics
(New) (1280)

P. Pages : 2

Time : Three Hours

Max. Marks : 100

Instructions to Candidates :

1. Do not write anything on question paper except Seat No.
2. Answersheet should be written with blue ink only. Graph or diagram should be drawn with the same pen being used for writing paper or black HB pencil.
3. Students should note, no supplement will be provided.
4. Solve **any two** questions from each unit.
5. Draw suitable diagram wherever necessary.

UNIT - I

1. Solve **any two** of the following. 10
- a) What is SPC ? How it is classified ? Describe various configurations in which a single processor is used to control all functions in SPC based systems.
- b) i) A call processor in a SPC exchange is requiring 120 msec to service a complete call. The corresponding switching system is capable of carrying 700 Erlangs of traffic on an average call holding time is 2 minutes calculate the BHCA rating of processor and call completion rate. 5
- ii) Describe in brief the DTMF signaling mechanism. 5
- c) With appropriate diagrammatic presentation describe different elements of a switching system. Explain various basic network configurations. 10

UNIT - II

2. Solve **any two** of the following.
- a) With appropriate diagrammatic representation describe the working mechanism of Time Division Time Switch.
Give a difference between TD space and TD time switch. Why combinations witch is used practically ? 10

- b) Give detail comparison between single stage and multi - stage switching network. 10
- c) With a appropriate sketch explain the working principle of a three stage network and show how the blocking probability of a three stage network is removed by Lee's model. 10

UNIT - III

3. Solve **any two** of the following.

- a) With reference to cellular system design explain the concept of frequency reuse. What is co - channel interference ? How frequency reuse affects the same. 10
- b) Draw the diagram of basic cellular system and describe various operations of cellular system. 10
- c) What is the need and occurrence of hand off in cellular system ? Describe the concept of forced hand off and inter system hand off of in detail. 10

UNIT - IV

4. Solve **any two** of the following.

- a) Explain in detail the architecture and architecture and radio parameters of GSM. 10
- b) With appropriate diagram describe the location update mechanism in GSM. 10
- c) Explain authentication and encryption security aspects of gsm. With necessary diagram. 10

UNIT - V

5. Solve **any two** of the following.

- a) What is RTP ? What are the contributions of RTP in protocol suite with proper diagram explain various fields of RTP packet header format. 10
- b) What is RSVP ? Draw and explain RSVP architecture and describe the concept of reservation merging. 10
- c) What is H.323 ? With appropriate diagram explain H. 323 protocol stack. 10
