

Code No: S9526

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD

B. Tech III Year I Semester Examinations, May - 2018

DATA COMMUNICATION SYSTEMS

(Information Technology)

Time: 3 hours

Max. Marks: 75

Answer any five questions
All questions carry equal marks

- 1.a) What is M-ary encoding? List the advantages.
- b) List and briefly describe the five basic data communications network topologies. [7+8]
- 2.a) Draw the metallic transmission line equivalent circuit and explain its working principle.
- b) List the metallic transmission line types. Compare them. [8+7]
- 3.a) Describe the fields within a T1 frame and discuss how synchronization is achieved with T1 frames.
- b) Distinguish between Synchronous and Statistical TDM. [8+7]
4. Describe satellite and cellular radio communications with help of neat diagrams and write their advantages. [15]
- 5.a) Explain the working of cordless telephones and paging systems.
- b) Describe the working of private - line telephone circuits and voice frequency circuit arrangements with neat diagrams. [7+8]
- 6.a) Explain the working of second generation cellular system with help of neat block diagram.
- b) Discuss about Global system for Mobile Communications in detail. [8+7]
- 7.a) Explain the working of the AT command set and cable modems with neat diagram.
- b) Describe probability of error and Bit error rate in modems with typical examples. [7+8]
- 8.a) Explain in detail about synchronous data – link protocol.
- b) Write a short note on high – level data – link control. [8+7]

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