Code :07A5EC20

III B.Tech II Semester(R07) Regular & Supplementary Examinations, April/May 2011
DATA COMMUNICATION SYSTEMS
(Information Technology)
(For students of RR regulation readmitted to III B.Tech II Semester R07)

Time: 3 hours   Max Marks: 80
Answer any FIVE questions
All questions carry equal marks
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1. (a) What are the advantages of layered architecture? Explain how layered architecture facilitates peer-to-peer communications protocols.

   (b) Define signal analysis. Explain how Fourier series is used in signal analysis.

2. (a) Describe balanced and unbalanced transmission lines.

   (b) Explain single-mode step-index optical fiber. Also mention its advantages and disadvantages.

3. (a) Define and describe Pulse code modulation.

   (b) Describe the DS-0 channel.

4. (a) Explain the concepts that aid to illustrate the effects of electromagnetic wave propagation.

   (b) Draw the block diagrams of microwave transmitter and receiver and explain their functioning.

5. (a) Describe the basic principles of paging systems.

   (b) Explain the operation of electronic telephones.

6. (a) Explain USDC Digital Modulation Scheme.

   (b) Explain briefly about CDMA.

7. (a) What is the purpose of the figure shift and letter shift in the Baudot code?

   (b) List and describe two methods of error correction.

8. (a) Define and describe high-level data-link control.

   (b) Describe synchronous data-link protocols.

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