

Code :R7310505

R7

III B.Tech I Semester(R07) Supplementary Examinations, May 2011

DATA COMMUNICATION SYSTEMS

(Common to Computer Science & Engineering, Information Technology)

Time: 3 hours

Max Marks: 80

Answer any FIVE questions
All questions carry equal marks

1. (a) Discuss in detail layered network architecture. What are its advantages and disadvantages?
(b) Describe the following harmonic wave symmetry: odd, even and half-wave.
2. (a) What are the two kinds of waves? Explain in detail.
(b) Compare the advantages and disadvantages of optical fibers compared to metallic cables.
3. (a) Draw the block diagram of a single channel, simplex PCM transmission system and explain.
(b) Describe frequency-division multiplexing.
4. (a) Explain a spherical wavefront and inverse square law.
(b) Describe reflection and diffraction properties of radio waves.
5. (a) Describe the basic principles of paging systems.
(b) Explain the operation of electronic telephones.
6. (a) Explain the AMPS classification of cellular telephone systems.
(b) Outline the advantages and disadvantages of PCS compared to standard cellular telephone.
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.
