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Question Paper Code : 65172

5 Year M.Sc. DEGREE EXAMINATION, MAY/JUNE 2013.

Fourth Semester

Software Engineering

ESE 043 — PRINCIPLES OF DATA COMMUNICATION

(Regulation 2010)

Time : Three hours

Maximum : 100 marks

Answer ALL questions.

PART A — (10 × 2 = 20 marks)

1. Write about Non-linear effects in FM.
2. Define sampling theorem.
3. Write about Shannon Fano coding.
4. Define entropy.
5. Compare duplex and simplex.
6. Why frequency domain view of signal is more important than time domain view?
7. Write the advantages of QPSK over BPSK.
8. What is the use of Delta modulation?
9. What is WDM?
10. Write the data transfer modes in HDLC.

PART B — (5 × 16 = 80 marks)

11. (a) Explain about the Quantization errors and various types of Quantization. (16)

Or

- (b) Write in detail about the various amplitude modulation schemes. (16)

12. (a) (i) Explain in detail about the efficiency in transmitting orthogonal signals. (8)

- (ii) Describe the operation of matched filter reception. (8)

Or

- (b) Write in detail about any two burst error correcting codes. (16)

13. (a) Explain about the various transmission impairments and how they may affect the information-carrying capacity of a communication link. (16)

Or

- (b) (i) Write in detail about how the transmission is achieved through Asynchronous transmission. (8)

- (ii) Explain about the two characteristics that distinguish various data link configurations. (8)

14. (a) (i) What is the limitation of NRZ coding and how does biphasic overcome it? (8)

- (ii) Write short notes on FSK. (8)

Or

- (b) With neat diagram explain about the operation of PCM and DM. (16)

15. (a) Write notes on stop and wait and sliding window protocol. (16)

Or

- (b) Explain about the data link control protocol. (16)