

C 32265

(Pages : 2)

Name.....

Reg. No.....

**FIFTH SEMESTER B.TECH. (ENGINEERING) DEGREE
EXAMINATION, JUNE 2007**

CS/IT 04 504—DIGITAL DATA COMMUNICATION

(2004 admissions)

Time : Three Hours

Maximum : 100 Marks

Answer all questions.

1. (a) Explain in detail the various categories of networks.
 (b) Differentiate analog signals from digital signals. Explain the difference. Give examples.
 (c) Explain the principle of CRC in detail.
 (d) Explain the principle of facsimile compression in detail with a neat sketch.
 (e) Give an account on Z-MODEM and Kermit.
 (f) Explain in detail about HDLC protocol.
 (g) Explain in detail about DTE interface.
 (h) List and explain the advantages of fiber optics in data transmission. (8 × 5 = 40 marks)

2. (a) (i) Explain the various standards of Data Communication. (8 marks)
 (ii) Describe the function of each layer in OSI model with a neat sketch. (7 marks)

Or

 (b) (i) State and derive an expression for channel capacity. (8 marks)
 (ii) Explain in detail about Shannon and Nyquist theorems. (7 marks)

3. (a) (i) Explain brief about PAM, PPM and PWM. (8 marks)
 (ii) Explain a generation method for each of the above with neat sketches. (7 marks)

Or

 (b) (i) Explain the types of spread spectrum in detail. (8 marks)
 (ii) Compare fiber optic communication with microwave communication. (7 marks)

4. (a) (i) Compare TDM and FDM. (8 marks)
 (ii) Draw a neat block diagram of FDM and explain its principle of operation. (7 marks)

Or

 (b) (i) Give an account on "Hamming Code". (8 marks)
 (ii) Derive the algorithm for Huffman coding with an example. (7 marks)

Turn over

5. (a) (i) Explain in detail stop and wait ARQ and Go back N. (8 marks)
(ii) Differentiate Asynchronous protocols from synchronous protocols. (7 marks)

Or

(b) Write technical notes on :

- (i) Character Oriented Protocol. (8 marks)
(ii) Bit oriented protocol. (7 marks)

[4 × 15 = 60 marks]