

B. TECH. SEMESTER VI (EC) ELECTRONICS & COMMUNICATION ENGINEERING
REGULAR EXAMINATION, April - June 2016
2EC 602:- COMPUTER NETWORKS

TIME: 3 HOURS

TOTAL MARKS: 70

INSTRUCTION:-

1. Attempt all questions.
2. Answers to the two sections must be written in separate answer books.
3. Figures to the right indicate full marks.
4. Assume suitable data, if necessary.

SECTION-I

- 1 (A) Draw the OSI model and list the functions of each layers in the OSI model. 10
- (B) Differentiate the Frame Relay and X.25. 2

OR

- 1 (A) Explain the TCP/IP Model with its existing protocol in detail. 10
- (B) Differentiate the routing and forwarding. 2

- 2 (A) Explain the ATM model in detail. 4
- (B) Explain the flow control in transport layer using window management in TCP. 4
- (C) List the error reporting command used in ICMP and differentiate the UDP and IP. 3

OR

- 2 (A) Draw and explain the frame format for Ethernet protocol. 4
- (B) What is subnetting and supernetting? Determine the initial address and last address for IP Address 100.150.180.240/18. 4
- (C) Define 1-persistent, p-persistent and explain the Pure Aloha Protocol. 3

- 3 (A) Explain the shortest path Routing algorithm using example.
- (B) An organization is granted a block of address with beginning address 16.198.40.0/24. the organization need to have 3 subblocks of address to use in its three subnets as given: (A) one subblock of 122 addresses, (B) one subblock of 62 addresses, (C) one subblock of 11 addresses.
- Design subnetwork for given data.

SECTION-II

- 4 (A) What is silly window syndrome? Explain solution of it at sender and receiver both. 6

(B) Explain the Hierarchical routing algorithm using suitable example.

OR

- 4 (A) Explain the E-mail Services using SMTP, POP3 and IMAP4 protocol. 6
- (B) Explain the Congestion control in TCP. 6
- 5 (A) What is switching? Compare circuit switching and packet switching techniques. 6
- (B) Cat-5 cables can carry more data over a longer distance than cat-3. Discuss. 3
- (C) Define HDLC. Mention the types of frames in HDLC. 2

OR

- 5 (A) What is flow control in data link layer? Explain sliding window flow control protocol. 5
- (B) Compare bridge and router. 3
- (C) Define: (i) STP (ii) 10BASE2 (iii) PSTN 3
- 6 (A) Explain stop and wait ARQ error control method. 6
- (B) Explain Frame generation methods in data link layer. 6

END OF PAPER
