(Please write your Exam Roll No.) Exam Roll No. .....

END TERM EXAMINATION

SIXTH SEMESTER [B.TECH(IT/CSE)] MAY-JUNE 2018

Paper Code: IT-304 **Subject: Computer Network**

Time: 3 Hours **Maximum Marks: 75**

Note: Attempt all questions as directed. Internal choice is indicated.

Q1 Attempt the following questions: **(10x2.5)**

(a) What is the need of layered structure in OSIRM?
(b) How many minimum number of redundant bits are necessary for error detection and error correction?
(c) Explain Back Off procedure.
(d) Define the terms latency and throughput.
(e) What are the drawbacks of stop and Wait ARQ?
(f) Explain the design issues of Network layer.
(g) Given the IP address 156.23.10.78, what is the Default Mask, Network ID, Host Id and the CLASS of the address.
(h) Define Slotted Aloha.
(i) What is the hamming distance for each of the codewords:d(10100,01101)&d (010001,111111)?
(j) Differentiate between FDMA and FDM.

UNIT-I

Q2 (a) What are the advantages of Computer Network? **(2.5)**
(b) Explain the structure of OSIRM and compare it with TCP/IP model **(10)**

OR

Q3 (a) What are the benefits of using OPTICAL FIBRES. **(2.5)**
(b) Explain the concept of Psudoternary and AMI technique used for digital data transmission. Explain by considering 11001010 as the data bits. **(5)**
(c) Write a short note on Telephone Systems. **(5)**

UNIT-II

Q4 Explain the concept of Selective Repeat ARQ. Why the size of window is 2^{n-1}? **(12.5)**

OR

Q5 (a) Explain the frame formats of I,S and U frames of HDLC protocol. **(6)**
(b) Given the dataword 1010011010 and the divisor 10111, show the generation of codeword at sender site and checking of the codeword at receiver side (assuming no error). **(6.5)**

UNIT-III

Q6 (a) What do you mean by Channel Allocation Problem? **(2.5)**
(b) Explain the technique used in Channelization (in Multiple Access Methods). **(10)**

OR

Q7 (a) What are the devices used at different layers of OSIRM? **(6)**
(b) Explain the frame format of IEEE 802.3 MAC sublayer **(6.5)**

UNIT-IV

Q8 Write short notes on the following: **(any two)** **(6.25x2)**
(a) Distance Vector Routing
(b) Forwarding Techniques
(c) How to create a routing table?

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