

BCA-404

1374

Even Semester Examination - 2017

BCA (IV SEMESTER)

**DATA COMMUNICATION  
& COMPUTER NETWORKS**

Time: 03:00 Hours

Max Marks :70

Note: Attempt all questions. Question 1 is compulsory.

1. Attempt the following :

5x3=15

- (a) Compare FDM & TDM.
- (b) Explain the layers of TCP/IP.
- (c) Discuss the structure of IPv6.
- (d) Differentiate verification and validation with example.
- (e) Compare and contrast the different life cycle model.

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(187)

2. Write a short note on the following:  $5 \times 3 = 15$

- (a) X.25 Protocol
- (b) MAC Protocol
- (c) Asynchronous and synchronus way of transmission.
- (d) OSPF
- (e) HDLC

3. Attempt any two of the following:  $2 \times 10 = 20$

- (a) Discuss an error detection technique currently used in today's computer networks.
- (b) Explain two congestion control mechanisms.
- (c) What are the functions of Data Link Layer?  
Explain stop & wait protocol.

4. Attempt any two of the following:  $2 \times 10 = 20$

- (a) Describe FTP and DNS in detail.
- (b) What is multiplexing? With a neat diagram explain FDM.

(c) We have four sources each creating 250 characters/sec. If the interleaved unit is one character and 1 synchronus bit is added to each frame, find

- (i) The data rate of each source
- (ii) The frame rate
- (iii) The duration of each frame
- (iv) The data rate of the link.

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(180)