

END TERM EXAMINATION

FOURTH SEMESTER [BCA] MAY-JUNE 2016

Paper Code: BCA-210

Subject: Computer Networks

Time: 3 Hours

Maximum Marks: 75

Note: Attempt any five questions including Q no.1 which is compulsory. Select one question from each unit.

- Q1 (a) What are the two types of line configuration? (2.5)
- (b) List four design issues in DLL of OSI model. (2.5)
- (c) What is bandwidth-delay product? (2.5)
- (d) Name two types of connectors for fiber-opticals. (2.5)
- (e) A multiplexer combines four 100kbps channels cables. Using a time slot of 2 bits. What is the frame rate and frame duration? (2.5)
- (f) What is dynamic routing? (2.5)
- (g) What is SYN flooding attack? (2.5)
- (h) Define Piggybacking and its benefit. (2.5)
- (i) What does the Shannon capacity have to do with data communication? (2.5)
- (j) What is the use of sockets in process-to-process communication? (2.5)

UNIT-I

- Q2 (a) Explain multimode and single mode for propagating light along optical channels. (5)
- (b) Discuss various design issues for presentation and application layer of OSI model. (7.5)
- Q3 (a) What is the role of DTE-DCE interface in internetworking? Explain with some examples. (7.5)
- (b) Describe the three types of transmission impairment. (5)

UNIT-II

- Q4 (a) Discuss LRC, VRC and CRC error detection mechanisms. (7.5)
- (b) What is Normal response mode and asynchronous balanced mode in data link control protocols. (5)
- Q5 (a) What is Synchronous Time-division multiplexing? Explain the process of Interleaving in TDM. (7.5)
- (b) What is Broadband ISDN? How BRI and PRI works? (5)

UNIT-III

- Q6 (a) What is a Router? How router boots up? Explain the role of IOS in routers. (7.5)
- (b) What is flooding in routing? Discuss the working of any dynamic routing algorithm. (5)
- Q7 (a) Explain the different types of classes in IPV4 addressing (classfull addressing) (5)
- (b) Describe distance vector and link state routing algorithm. (7.5)

UNIT-IV

- Q8 (a) What is port addressing? list three ICANN ranges for port addressing. (5)
- (b) With respect to TCP discuss the role of the following:- (7.5)
 - (i) Sequence Number
 - (ii) Acknowledgement Number.
 - (iii) Window size
 - (iv) Urgent points.
- Q9 (a) Compare client-server and peer-to-peer application layer Paradigms (5)
- (b) With respect to UDP discuss the role of the following:-
 - (i) Pseudo header (3)
 - (ii) Destination port number (2)
 - (iii) Length field. (2.5)

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