

# END TERM EXAMINATION

FOURTH SEMESTER [BCA] MAY 2018

Paper Code: BCA-210

Subject: Computer Network

Time: 3 Hours

Maximum Marks: 75

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

- Q1 Answer the following: (2.5x10=25)
- (a) Explain Shannon Capacity Theorem.
  - (b) What are different components of data communication?
  - (c) Discuss different types of transmission impairments.
  - (d) What is Flooding?
  - (e) Write a short note on DNS.
  - (f) Define network. Discuss various network criteria.
  - (g) Explain Piggybacking and its benefits.
  - (h) What is a datagram?
  - (i) Discuss Broadband-ISDN.
  - (j) Write a short note on cable modems.

### Unit-I

- Q2 (a) Write a short note on guided media. (8.5)  
(b) Define throughput, bandwidth, response time, and frequency. (4)
- Q3 (a) Draw a neat diagram of OSI model and explain the functioning of each layer. (9.5)  
(b) Differentiate between simplex, half duplex and full duplex. (3)

### Unit-II

- Q4 (a) Define ISDN. What are its various services and layers? (6)  
(b) What is multiplexing? Explain various types of multiplexing. (6.5)
- Q5 (a) Define Flow Control. Explain any one flow control algorithm. (6.5)  
(b) Differentiate between circuit, packet and message switching. (6)

### Unit-III

- Q6 (a) What is routing? Explain distance vector routing algorithm with an example. (6.5)  
(b) Write a short note on following networking devices: (6)  
(i) repeaters  
(ii) bridges  
(iii) gateways  
(iv) routers

- Q7 (a) Explain static and dynamic routing. (5)  
(b) What is forwarding function? Explain link state routing algorithm with an example. (7.5)

### Unit-IV

- Q8 (a) Explain three-way handshaking connection management in TCP. (7.5)  
(b) Compare TCP and UDP Protocols. (5)
- Q9 (a) Explain TCP packet format in detail. (8.5)  
(b) What are the functions of session and presentation layer? (4)

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