

2012

Bachelor of Computer Application

Fifth Semester

BCA-16-501: Computer Networks

Time allowed: 3 Hours

Max. Marks: 65

NOTE: Attempt five questions in all, including Question No. 9 (Section-E) which is compulsory and selecting one question each from Section A-D.

x-x-x

Section A

1. a) What are peer-to-peer networks and broadcast networks? Write the differences between these networks. (4)
- b) Explain the functions of different layers of OSI Reference model. (9)
2. a) What is the meaning of unguided transmission media? Explain Radio wave and Microwave transmissions. (7)
- b) What is ISDN? Explain different ISDN services. (6)

Section B

3. a) What is the importance of framing in Data Link Layer? Explain various techniques of framing. (7)
- b) How CRC code is used in error detection? Illustrate your answer with a relevant example. (6)
4. a) What are Data Link protocols for noisy channels? (4)
- b) What are the Sliding Windows protocols? Explain stop & wait ARQ and Go-Back-N ARQ along with their advantages and disadvantages. (9)

Section C

5. a) Explain the role of these components in a computer network- Hub, Bridge, Repeater, Modem and Switch (5)
- b) Explain shortest Path and Flooding methods of routing? (8)
6. a) What is congestion? What are the factors that lead to congestion in a network? Explain Leaky Bucket algorithm. (7)
- b) What is IP? Explain the different IP addressed Classes. (6)

Section D

7. a) What is the importance of network security in today's communications networks? How organizations can protect data during online communication? (6)
- b) Explain World Wide Web. (7)

P.T.O.

(2)

8. Write short notes on the following terms

(5,4,4)

i) POP3 ii) SMTP iii) MIME

Section E

9. Attempt all questions

- a. Write benefits of computer networks during a Pandemic? (2)
- b. What is Half Duplex transmission? Give two examples. (2)
- c. What is Multi - mode fiber optics? (2)
- d. What is Token Bus? (2)
- e. What is used as light detectors in Fiber Optics? (1)
- f. What are the drawbacks of light wave transmission? (2)
- g. What is Remote Login? (2)

X-X-X