

Section - D

(1 × 10 = 10)

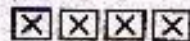
- Q7)** Give guidelines for identifying objects in object oriented analysis. Compare Object Oriented Analysis and data structure oriented analysis.
- Q8)** Based on your experience with a Bank ATM, draw an ER diagram modeling the data processing involved when a customer withdraws cash from an ATM machine.

Section - E

(10 × 2 = 20)

Q9)

- a) Differentiate persistent and non-persistent objects.
- b) What do you mean by static and dynamic modeling?
- c) What is the role of an object in C++?
- d) What are models and meta models?
- e) In C++, what is operator >> called?
- f) When is a constructor called?
- g) What the use of preprocessor directive (# include)?
- h) What is function overloading in C++?
- i) How is a constructor different from destructor?
- j) By default, what are fields in a C++ class called?



Roll No.

Total No. of Questions : 07)

[Total No. of Pages : 02

BCA (Sem. - 4th)
COMPUTER NETWORKS
SUBJECT CODE : BC - 401
Paper ID : [B0215]

[Note : Please fill subject code and paper ID on OMR]

Time : 03 Hours

Maximum Marks : 60

Instruction to Candidates:

- 1) Section - A is Compulsory.
- 2) Attempt any Four questions from Section - B.

Section - A

Q1)

(10 × 2 = 20)

- a) In which topology, if a computer's network cable is broken, whole network goes down.
- b) For large networks which topology is used?
- c) What does ISO stands for?
- d) What is ISO OSI model used in?
- e) Network cable lies on which layer?
- f) Which layer decides which physical pathway the data should take?
- g) What are the possible ways of data exchange?
- h) How Gateway is different from Routers?
- i) What is attenuation?
- j) What is the difference between bit rate and baud rate?

Section - B

(4 × 10 = 40)

- Q2)** What are the types of Transmission media used in computer networks? Compare their cost vs the throughput.
- Q3)** Explain the connection establishment and multiplexing in the transport layer protocol. Explain the three differences between CSMA/CD and token ring protocol.
- Q4)** What are the two popular approaches to packet switching? Explain any one of these approaches with the help of a diagram. Differentiate between Hubs, Switches and bridges.
- Q5)** The physical service is a non-confirmed service. If some data bits are lost during transmission over the interconnecting media, which layer detects their loss and takes recovery action? Explain this. Explain how does a store-and-forward system affect the delivery of data traffic?
- Q6)** What is the difference between synchronous communication and asynchronous communication? Also state the difference between serial and parallel communication.
- Q7)** A bit stream 10011101 is transmitted using the standard CRC method described in the text. The generator polynomial is $x^3 + 1$. Show the actual bit string transmitted. Suppose the third bit from left is inverted during transmission. How the error does get detected at receiver's end?

