

Roll No.

Total No. of Pages : 02

Total No. of Questions : 09

**BMCI (2014 & Onwards) (Sem.-3)**

**COMPUTER NETWORKS**

**Subject Code : BSBC-603**

**Paper ID : [72586]**

Time : 3 Hrs.

Max. Marks : 60

**INSTRUCTIONS TO CANDIDATES :**

1. SECTION-A is **COMPULSORY** consisting of **TEN** questions carrying **TWO** marks each.
2. SECTION-B contains **FIVE** questions carrying **FIVE** marks each and students have to attempt any **FOUR** questions.
3. SECTION-C contains **THREE** questions carrying **TEN** marks each and students have to attempt any **TWO** questions.

**SECTION A**

**1. Answer briefly :**

- a) Define Computer Networks.
- b) Differentiate between synchronous and asynchronous transmission.
- c) What is Multiplexing? What is its need?
- d) Discuss the Ring topology in brief.
- e) Briefly explain radio transmission.
- f) Discuss optimality routing principle in brief.
- g) What is Flooding?
- h) Discuss in brief the working of IEEE standard 802.4 (Token Bus).
- i) What is the difference between CSMA/CD and CSMA/CA protocols?
- j) What is Internetworking?

### SECTION B

2. Discuss and compare different types of networks.
3. Discuss the structure of the telephone system. What are the major components of the telephone system?
4. What is switching? Discuss Message switching technique.
5. Discuss and compare FDM and TDM.
6. Discuss Floyd Warshall shortest path algorithm.

### SECTION C

7. Describe the OSI seven layer model. Name each of the layers in the model and draw a diagram that shows the ordering of these layers. Describe the areas of function that each layer is responsible for.
8. What are the various services provided by Data Link Layer to the Network Layer? Elaborate Flow control in detail.
9. Elaborate in detail the various congestion control policies.