

Roll No. : .....

Total No. of Questions : 11 ]

[ Total No. of Printed Pages : 3

# **BPP-1112**

**M.Sc. (Previous) Examination, 2022**

**INFORMATION TECHNOLOGY**

Paper - MIT-105

**(Data Communication and Networking)**

*Time : 3 Hours ]*

*[ Maximum Marks : 50*

**Section-A**

**(Marks : 2 × 10 = 20)**

*Note :-* Answer all *ten* questions (Answer limit **50** words). Each question carries **2** marks.

**Section-B**

**(Marks : 3 × 5 = 15)**

*Note :-* Answer all *five* questions. Each question has internal choice (Answer limit **200** words). Each question carries **3** marks.

**Section-C**

**(Marks : 5 × 3 = 15)**

*Note :-* Answer any *three* questions out of five (Answer limit **500** words). Each question carries **5** marks.

**Section-A**

1. Attempt all questions :

- (i) Write the names of layers in TCP/IP Model.
- (ii) Define Protocol.

**BR-686**

( 1 )

**BPP-1112** P.T.O.

- (iii) What do you mean by Encoding ?
- (iv) Explain Satellite Microwave Communication ?
- (v) Explain Wireless LAN.
- (vi) What do you mean CRC ?
- (vii) What is Firewall ?
- (viii) Explain concept of Subnetting ?
- (ix) Write a short note on Conventional Encryption.
- (x) What is Flow Control ?

### **Section-B**

**Note** :- Answer all *five* questions.

2. Draw OSI Reference Model.

***Or***

Differentiate between various types of Networks.

3. Explain various Transmission Media.

***Or***

Differentiate between Space Division and Time Division Switch.

4. Write a short note on IEE 802.3, 802.4, 802.5.

***Or***

Write down Data Link Layer Services.

5. Differentiate between Connection Oriented and Connection Less TCP Layer Services.

***Or***

Explain Public Key Encryption Model.

6. Write difference between Packet Switching and Circuit Switching.

*Or*

What do you mean by Congestion ? Write down various effects of congestion in network.

### **Section-C**

*Note :-* Answer any *three* questions.

7. Draw and explain IP Protocol Header.
8. Explain Sliding Window and Selective Repeat Protocol.
9. Explain Dijkstra routing.
10. Explain Nyquist and Shannon Theorem for Channel Capacity.
11. Explain NRZ-L, NRZ-I, Manchester and differential Manchester encoding method with help of an example.