

TE/CMPN/II (REV.)

CN.

27/5/14

QP Code : MV-18488**(3 Hours)****[Total Marks : 100]**

1. Question No 1 is compulsory.
2. Attempt any four out of the remaining six questions.

- Q1. (a) What is the difference between a protocol, a service and an interface? 05
 (b) List the advantages of fiber optics as a communication medium. 05
 (c) Discuss the merits of the OSI reference model. 05
 (d) Define the following with examples:- 05
 MAC address, IP address, Baud rate, Latency.
- Q2. (a) Explain sliding window protocol using Go Back-n Techniques. 10
 Q2.(b) i) State and explain the duties of the Data Link Layer. 07
 ii) Assume that Character Stuffing method of framing is being used with each data frame preceded by the character sequence DLE STX and ending with DLE ETX. If the data to be transmitted is A DLE B DLE ETX, show what is the actual transmitted frame. DLE stands for the Data Link Escape character. 03
- Q3 (a) How are collisions handled by a 1-persistent CSMA protocol? Give an example of a collision free multiple access protocol and explain in detail. 10
 Q3(b) What are the different types of routing protocols? Explain Distance vector routing. 10
- Q4. (a) What are the congestion prevention policies? Explain congestion control in virtual circuit and datagram subnets. 10
 (b) What is traffic shaping? Explain Leaky bucket algorithm. 10
- Q5 (a) Explain the different classes of IP addresses. Identify the class of the following IP addresses and give their default subnet masks. i) 227.56.83.0 10
 ii) 114. 22.43.21 iii) 129.14.12.21
- Q5 (b) Differentiate between 10
 i) OSPF and BGP
 ii) TCP and UDP
- Q6 (a) Explain the functions of the different internetworking components and state the layer in which they work. 10
 Q6 (b) Explain in details the fields of the IPV4 header with a neat diagram. 10
- Q7. Short notes on: (any two) 20
 i) TCP connection establishment and release
 ii) Transport service primitives
 iii) Berkely sockets
 iii) Satellite communiation.