

BACHELOR OF TECHNOLOGY (C.B.C.S.) (2014 COURSE)
B.Tech.Sem - VII ELECTRONIC : : SUMMER - 2022
SUBJECT : COMPUTER NETWORKS

Day : Monday
Date : 30-05-2022

S-13393-2022

Time : 02:30 PM-05:30 PM
Max. Marks : 60

N.B.

- 1) All questions are **COMPULSORY**.
 - 2) Figures to the right indicate **FULL** marks.
 - 3) Draw neat and labelled diagram **WHEREVER** necessary.
 - 4) Assume suitable data, if necessary.
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Q.1 Suggest various network topologies for broadcast network and list their advantages and disadvantages. **(10)**

OR

Q.1 Draw and explain ISO-OSI reference model? Explain drawbacks of ISO-OSI reference model. **(10)**

Q.2 List the names and characteristics of transmission mediums used for networking. **(10)**

OR

Q.2 a) Compare circuit switching, message switching and packet switching. **(10)**
b) Explain Fast Ethernet and Gigabit Ethernet.

Q.3 Explain sliding window protocols. Also support your answer with an example. **(10)**

OR

Q.3 Explain ALOHA and slotted ALOHA MAC protocols. **(10)**

Q.4 How congestion affects network performance. Also explain the difference between flow control and congestion control. **(10)**

OR

Q.4 What is dynamic routing? Discuss with distance vector routing with example. **(10)**

Q.5 Explain all IP address formats and range of host addresses for each. **(10)**

OR

Q.5 With the help of suitable diagram show the components of SNMP management model. Discuss the function of each block. **(10)**

Q.6 a) Distinguish between symmetric and asymmetric encryption techniques. **(10)**

b) Explain the design goals of firewalls.

c) List and explain in brief different types of security attack.

OR

Q.6 Draw the general structure of simple DES and explain how encryption decryption are carried out. Also mention the strength and weakness of DES algorithm. **(10)**

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