

VII SEMESTER B. TECH. (INSTRUMENTATION AND CONTROL ENGG.) END SEMESTER DEGREE EXAMINATION JANUARY 2021

COMPUTER NETWORKS AND PROTOCOL [ICE 4017]

TIME: 3 HOURS

29-01-2021

MAX. MARKS: 50

Instructions to candidates			
•	Answer ALL questions.		
•	Missing data may be suitably assumed.		

- 1A Explain the functionalities of various organizations involved in the administration of Internet with neat diagram.
- 1B Differentiate computer network with distributed system? Give an example for each.
- 1C Explain the characteristics and functionalities of layers, protocols and Interfaces. List the limitations of these in each layer.

(4+2+4)

- 2A Explain the different types of addressing used on Internet, associated with each layer of TCP/IP protocol suite. Give an example for each.
- 2B An organization is granted the block 130.34.12.64/26. The organization needs four subnetworks, each with an equal number of hosts. Design the subnetworks and find the information about each network. Diagrammatically show the representation

(5+5)

3A The inter-network shown in Table has four statistically configured routers that share three networks. To reduce the configuration time it was recommended to go for dynamic routing. Configure and verify the routers with suitable protocol that uses composite metric. Draw the network diagram for the same.

Router	Network address	Interface	Address
3501	172.18.10.0	SO	172.18.10.1
3501A	172.18.10.0	SO	172.18.10.2
3501A	172.18.20.0	S 1	172.18.20.1
3501A	172.18.30.0	E0	172.18.30.1
3501B	172.18.30.0	E1	172.18.30.2
3501C	172.18.20.0	S 1	172.18.20.2

- 3B Describe the different layers of a virtualization with neat block diagram and example.
- 3C Define cloud computing. Explain elastic block store package.

(4+4+2)

4A Design the routing table for router R1 shown in the network below using classless addressing. The router R1 receives two packets with destination address of 192.16.7.14 and 167.24.160.5 respectively. Explain how the packets are forwarded in the network.



4B Explain the different types of server farms in an enterprise datacentre. Give an over view of the different server farms available in a crude oil processing industry.

5A Illustrate with an example SAAS, PAAS and HAAS. List any two advantages and disadvantages of each service.

5B Illustrate how IP packets are delivered in a small network. With help of a network diagram, show the stages of transfer.