Reg. No.										

MANIPAL INSTITUTE OF TECHNOLOGY

MANIPAL

(A constituent unit of MAHE, Manipal)

SEVENTH SEMESTER B. TECH. (INSTRUMENTATION AND CONTROL ENGG.)

END SEMESTER DEGREE EXAMINATIONS, NOVEMBER - 2018

SUBJECT: COMPUTER NETWORKS AND PROTOCOL [ICE 4017]

TIME: 3 HOURS **MAX. MARKS: 50**

Instructions to candidates

- Answer **ALL** questions.
- Missing data may be suitably assumed.

1A List the types of services in connection oriented and connection-less service with an example. 2

1B With the help of a flowchart, explain different maturity levels of an RFC. 5

1C With an example, brief about different connecting devices used in networking. 3

2A Which addressing format is most commonly used in representing IPV4 protocol addresses? Explain all the formats with an example. 3

2B With the help of a pie-chart, explain different classes of address available in IPV 4 protocol. What is the Net ID range and total number of address in all classes and blocks? 4

2C An organization is granted the block 130.34.12.64/26. The organization needs four subnetworks, each with equal number of hosts. Design the subnetworks and find the information about each network. 3

3A Compare all the features of Static and Dynamic routing? 2

3B The inter-network shown in Table 3B has four statically configured routers that share three networks. To reduce the configuration time it was recommended to go for dynamic routing (RIP). Configure and verify the routers with suitable protocol that uses composite metric. Draw the network diagram for the same. 5

Table 3B

Router	Network address	Interface	Address
3501	172.18.10.0	S0	172.18.10.1
501A	172.18.10.0	S0	172.18.10.2
3501A	172.18.20.0	S1	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	S1	172.18.20.2

3C Differentiate distance vector routing and link state routing techniques. 3

4A Illustrate the working of various trunking mechanism. 3

4B Brief various special address available in IPV 4 protocol. 2

4C Write the routing tables for R1 shown in Fig. 4C. Router R1 receives a packet with destination address 167.24.160.5, show how the packet is forwarded. 2

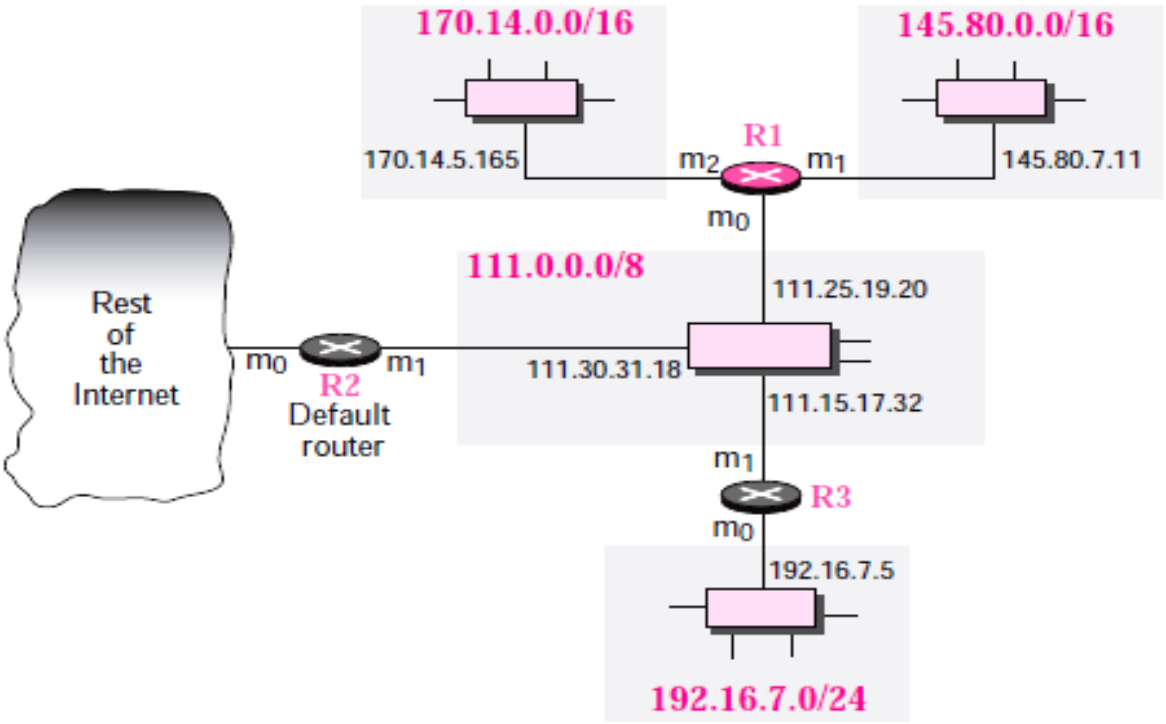

Fig. 4C

4D Explain all the key properties of virtual machine. 3

5A What is cloud computing? List its advantages and disadvantages. 2

5B Brief about different services available in cloud computing. List any two advantages and disadvantages for each service. 5

5C Explain the different types of server farms in an enterprise datacentre. 3

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