



VI SEMESTER B.TECH (ELECTRICAL & ELECTRONICS ENGINEERING) END SEMESTER EXAMINATIONS, APRIL - MAY 2017

SUBJECT: COMPUTER NETWORKS [ELE 4017]

REVISED CREDIT SYSTEM

Time: 3 Hours

Date: 27, April 2017

Max. Marks: 50

Instructions to Candidates:

- ❖ Answer **ALL** the questions.
- ❖ Missing data may be suitably assumed.
- ❖ Draw diagrams wherever necessary.

- 1A.** Explain the reference model widely known for its protocols with neat diagram. (05)
- 1B.** Explain the step by step process involved in transforming a working document into an internet standard. (05)
- 2A.** An university is granted a block of addresses with the beginning address 14.24.74.0/24. The organization needs to have 2 subblocks of addresses to get connected to the institutions as shown below. Mention the first and last address of each subblock. Also mention the number of address wasted.
- a) One subblock of 120 addresses.
- b) One subblock of 30 addresses. (04)
- 2B.** Explain supernetting and subnetting with an example each. (03)
- 2C.** Explain the process of selecting the root bridge, root ports and designated ports using an example. (03)
- 3A.** Define virtualization? Brief about the key properties of virtualization. (05)
- 3B.** For the network given in Table 3B, configure and verify the routers using RIP configuration technique.

Table 3B

Router	Network address	Interface	Address
3501	172.16.10.0	S0	172.16.10.1
3501A	172.16.10.0	S0	172.16.10.2
3501A	172.16.20.0	S1	172.16.20.1
3501A	172.16.30.0	E0	172.16.30.1
3501B	172.16.30.0	E1	172.16.30.2

(05)

- 4A.** What is the relation between cloud and datacenter? Explain the range of services offered by the cloud vendors. (04)
- 4B.** What is the significance of NIC? What is TCP/IP offloading? Explain server multihoming with neat diagrams. (06)
- 5A.** Define clustering. Explain the different types of clusters supported by cluster software. (04)
- 5B.** With a neat diagram of the enterprise datacentre explain in detail the layers in a server farm. (06)