Roll No. | | | | | | | | | | |

**B.E / B.Tech ( Part Time ) DEGREE END SEMESTER EXAMINATIONS, APRIL / MAY 2014**

Electronics and Communication Engineering

Semester : V

**PTEC9353-Communication Networks**

(Regulation 2009)

Time: 3 Hours Answer ALL Questions Max. Marks 100

**PART-A (10 x 2 = 20 Marks)**

1. Give the advantages of fiber optic cable over copper cable.
2. Draw the topologies i) Bus ii) Mesh iii) Ring iv) star
3. Derive the minimum length of a packet for a IEEE 802.3 standard .
4. List the functions of logical link layer.
5. Explain the leaky bucket algorithm.
6. With diagram explain the growing window of TCP?.
7. Define the confidentiality and integrity.
8. Draw a 4x4 crossbar switch discuss about its merits compared to time switch.
9. Give the applications of TELNET.
10. Differentiate between a switch and a router.

**Part – B ( 5 x 16 = 80 marks)**

11.i With neat diagram explain the functions of each layer in a ISO OSI reference model.
ii) Define the following i) layer, ii)protocol, iii) service and iv)interface

12. a)Explain with neat required diagram the Physical and MAC layer of IEEE 802.3 and 802.5.

**OR**

b) Draw and explain the frame format of HDLC protocol .Also setup a Asynchronous balanced mode connection between two Stations and explain the information transfer between them under Go-back-n and selective repeat protocol.

13. a.i)Differentiate circuit switching, virtual circuit switching, virtual packet switching. (10)
ii) Draw packet format of IPV6.(6)

**OR**

b.i)consider 7 nodes connected in a linear bus topology, assume hopcount as the cost function explain the distance vector routing. (8)
ii) Explain the count to infinity and broadcast storm problem in distance vector routing.(8)

14. a i)Differentiate symmetric key and Asymmetric key cryptography
ii) Explain the 128 bit AES algorithm

**OR**

b)Write notes on i) WWW ii) HTTP iii) FTP IV) SNMP

15. a i) Derive the blocking probability for three stage switching network. (8)
ii)Explain the STS switching architecture. (8)

**OR**

b)With required diagram explain the digital cross connect systems and ESS Toll switch.

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