Roll No .....

EC-803

B.E. VIII Semester

Examination, June 2016

Computer Network

Time : Three Hours

Maximum Marks : 70

Note: i) Answer five questions. In each question part A, B, C is compulsory and D part has internal choice.

ii) All parts of each questions are to be attempted at one place.

iii) All questions carry equal marks, out of which part A and B (Max.50 words) carry 2 marks, part C (Max.100 words) carry 3 marks, part D (Max.400 words) carry 7 marks.

iv) Except numericals, Derivation, Design and Drawing etc.

Unit - I

1. a) List layers where OSI and TCP models are similar and differs.
   b) Explain with example different types of guided and un-guided medias in Computer Networks.
   c) Explain Ring topology with application to Computer Networks.
   d) What are the designing issues of physical layer.

OR

Explain different types of switches and their operation in detail.

Unit - II

2. a) Explain sliding window protocol.
   b) Explain mechanism of stop and wait ARQ error control protocol.
   c) What do you understand by Fast and Gigabit Ethernet?
   d) Discuss IEEE 802.3 CSMA/CD on the basis of merits and demerits.

OR

A 56 kbps pure ALOHA channel is being shared by N stations, each station outputs a 1000-bit frame on an average of once every 100 seconds, even if the previous one has not yet been sent. Calculate the maximum value of N.

Unit - III

3. a) Explain bluetooth protocol of data transfer.
   b) Differentiate between IEEE 802.11 and IEEE 802.16 standards.
   c) How bridge, repeater, switch and router differs based upon applications?
   d) Class B network has a subnet mask of 255.255.240.0. Calculate the maximum number of hosts per subnet.

OR

Discuss compatibility of IPv6 and IPv4.

Unit - IV

4. a) Describe services provided by transport layer.
   b) List out advantages of UDP protocol.
   c) List differences between UDP and TCP protocols with their applications.
   d) If round trip time of TCP is 30 m.sec and acknowledgements comes after 26, 32 and 24 m.sec, respectively, what is the new RTT estimate? Use $\alpha = 0.9$.

OR

Explain functions of TCP header format fields.

Unit - V

5. a) How domain name server, DNS works?
   b) Write process of sending message via email.
   c) What are the streaming videos?
   d) Explain working of world wide web, www in detail.

OR

How simple mail transfer protocol, SMTP interacts with local mails and TCP?

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