Or

10. Write short notes:

i) Domain Name system.

ii) World Wide Web.

iii) Content delivery.

iv) Email.

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Total No. of Questions :10] *[Total No. of Printed Pages :4*

Roll No .....

EC - 803

B.E. VIII Semester

Examination, June 2015

Computer Network

Time : Three Hours

Maximum Marks : 70

Note : i) Attempt all questions.
ii) All questions carry equal marks.

1. a) During the communication how the various layer exchange information in OSI model? Describe with the help of suitable diagram. 7

b) Explain the TCP/IP architecture. Show the comparison with the OSI model with the help of schematic diagram. 7

Or

2. a) Explain frequency domain and time domain characteristics of communication channel. Define the terms. 7

i) Bandwidth

ii) Throughput

iii) Latency

b) What is circuit switched Network? How communication is established in these network? 7

3. a) Explain the working of stop and wait and selective repeat ARQ protocol. 7

   b) Compute the CRC for a 10 - bit sequence 1010011110 and a divisor of 1011. 7

Or

4. a) Prove that utilization of sliding window protocol for error free channel is $U = \frac{W}{1+2a}$ where 'W' is window size and 'a' is ratio of propagation time to transmission time. 7

   b) A pure ALOH A network transmit 200 - bit frames on a shared channel of 200 kbps. What is the throughput if the system (All station together) produces? 7

      i) 1000 frames per second.

      ii) 500 frames per second.

      iii) 250 frames per second.

      In which case percentage wise maximum throughput would be achieved.

5. a) Distinguish between the following: 7

      i) Static and dynamic routing

      ii) Centralized and distributed routing.

   b) Explain the concept of Tunneling in internet working write down the differences in IPv4 and IPv6. 7

Or

6. a) Compare virtual circuit and datagram subnet. State the principles of congestion control and congestion prevention policies. 7

   b) Distinguish between multicasting and multiple unicasting. Also, give reason why we have a separate mechanism for multicasting, when it can be emulated with unicasting? 7

7. a) Define TCP and discuss the different fields of TCP packet format with the help of a diagram. 7

   b) Why does UDP exists? Would it not have been enough to just let user processes send raw IP packets? Justify your answer. 7

Or

8. a) How connection is established and Terminated in TCP using three way handshaking mechanism? Describe in detail. 7

   b) What are the different services that TCP provides to application program? 7

9. a) Why do you think DNS uses UDP, instead of TCP, for in query and response messages? 7

   b) Suppose you are sending an email from your Hotmail account to your friend, who reads his/her email from his/her mail server using IMAP. Briefly describe how your email travels from your host to your friend's host. Also, what are the application layer protocols involved into this? 7