

(Following Paper ID and Roll No. to be filled in your Answer Book)

PAPER ID : 110601

Roll No.

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B.Tech.

(SEM. VI) THEORY EXAMINATION 2013-14

COMPUTER NETWORK

Time : 3 Hours

Total Marks : 100

Note :- (1) Attempt all questions.

(2) All questions carry equal marks.

1. Attempt any four parts of the following : (5×4=20)
 - (a) Discuss the TCP/IP protocol suite on the basis of protocol layering principle.
 - (b) Define topology and explain the advantage and disadvantage of Bus, Star and Ring topologies.
 - (c) Explain briefly the bus backbone and star backbone.
 - (d) Explain the user access in ISDN.
 - (e) Compare twisted pair, co-axial and fiber optic cable.
 - (f) Explain the various types of Switching Methods with suitable examples.

2. Attempt any four parts of the following : (5×4=20)
 - (a) State drawbacks of stop and wait protocols.
 - (b) What is piggybacking ?
 - (c) Which are the requirements of CRC ?

- (d) How can you compare pure ALOHA and Slotted ALOHA ?
 - (e) Explain about CSMA/CD and CSMA/CA and its uses.
 - (f) Differentiate between 802.3, 802.4 and 802.5 IEEE Standards.
3. Attempt any two parts of the following : (10×2=20)
- (a) What is meant by fragmentation ? Is fragmentation needed in concentrated virtual circuit internets, or in any datagram system.
 - (b) Give an IP address, how will you extract its net-id and host-id and compare IPv4 and IPv6 with frame format.
 - (c) (i) What is meant by unicast and multicast routing with suitable diagrams ?
(ii) Write a short note on Leaky bucket algorithm.
4. Attempt any two parts of the following : (10×2=20)
- (a) Explain about the TCP header and working of TCP protocol and differentiate between TCP and UDP with frame format.
 - (b) Define cryptography with the help of block diagram of Symmetric and Asymmetric key cryptography.
 - (c) Write short notes on :
 - (i) Digital audio
 - (ii) Audio compression
 - (iii) Streaming audio.

5. Attempt any two parts of the following : (10×2=20)
- (a) Explain the two mail access protocols in brief :
 - (i) POP3
 - (ii) IMAP
 - (iii) SMTP
 - (b) Write a short note on :
 - (i) FTP
 - (ii) DNS
 - (iii) MIME
 - (iv) TFTP
 - (c) Explain about e-mail architecture and services.