

TCS-502

1031

Printed Pages : 4

Paper Code & Roll No. to be filled in your Answer Book

Roll No.

--	--	--	--	--	--	--	--	--	--

B. Tech. III year (V Sem.)

Odd Semester Examination-2015

COMPUTER NETWORKS

Time : 3 Hours]

[Maximum Marks :100

Unit I

Answer Any Four

(4x5=20)

1. Which OSI layer perform s the following activities:-
 - (i) Error detection and correction.
 - (ii) Routing.
 - (iii) Responsibility for delivery between adjacent nodes.
 - (iv) Reliable process to process data transportation.
 - (v) Framing
2. How much minimum bandwidth is required to digitally transmit a anolog stream which is generated at 50 Khz after Manchester encoding?
3. Define a switch. List the three conventional switching methods.

4. Define topology & explain the advantages and disadvantages of bus, star and ring topology.

5. What is the principal difference between connectionless communication and connection - oriented communication.

UNIT - 2

Answer Any Four

(4x5=20)

1. What is static and dynamic channel allocation.

2. How is line coding implemented in FDDI?

3. Discuss the sliding window protocol in detail.

4. Compare and explain the pure and slotted ALOHA system.

5. Differentiate between 802.3, 802.4 and 802.5 IEEE standard.

i) Go-Back-N protocol.

ii) Sliding window protocol.

UNIT - 3

Answer Any Two

(2x10=20)

1. Explain the distance vector routing protocol with the help of an example. Also discuss the major problem encountered in distance vector: count to infinity problem.

2. Describe the powerful congestion control algorithm used in data communication network to minimize loss of data.
3. (i) A class B network on the internet has a subnet mask of 255.255.240.0. What is the maximum number of hosts per subnet?
(ii) Discuss the functioning of RARP(Reverse Address Resolution Protocol).

UNIT - 4

Answer Any Two

(2x10=20)

1. Explain about the three hand shake protocol for connection establishment in TCP.
2. (i) What is TCP? Connection termination in TCP is symmetric, whereas connection establishment is not. Why?
(ii) How does the transport layer ensure that the complete message arrives at the destination and in the proper order?
3. The following is the dump of a TCP header in hexadecimal format:
05320017 00000001 00000000 500207FF 00000000
 - i) What is the sequence number?
 - ii) What is the destination port number?
 - iii) What is the acknowledgement number?
 - iv) What is window size?

UNIT - 5

Answer Any Two

(2x10=20)

1. **Explain how SMTP can handle transfer of videos and images?
Also explain the advantages of IMAP 4 over POP 3 mail access protocols.**
2. **Write short notes on:**
 - i) **DNS**
 - ii) **SNMP**
 - iii) **XML**
3. **Explain about e-mail architecture and services..**