SHAHEED BHAGAT SINGH STATE TECHNICAL CAMPUS, FEROZEPUR

ROLL No.: | | | | | | | | | | |

Total number of pages:[2]
Total number of questions =6

B.Tech.-Electronics and Communication Engg. (Semester-7th)

Computer Networks

Subject code: BTCS-403
Paper ID:[ ]
Batch: 2011 onwards

Time allowed: 3 Hrs. **Max. Marks: 60**

Important Instructions:

- **All questions are compulsory.**
- **Assume any missing data.**

PART A (10 x 2 marks)

Q. 1. (a) Define Protocol and Interface.
(b) Define "denial of service" attack.
(c) What do you mean by socket?
(d) What is URL? Give the names of the components of URL.
(e) Define attenuation?
(f) Define piggybacking and discuss its usefulness.
(g) What is HTTP?
(h) What are headers and trailers and how do they get added and removed?
(i) Define choke packets.
(j) A class B network on internet has subnet mask 255.255.0.0. What is the maximum number of hosts?

PART B (5 × 8 marks)

Q. 2. Differentiate OSI reference model with TCP/IP Protocol suite. Why TCP/IP model is more popular than OSI model? [CO1]

OR

Compare various network topologies in a computer network and also discuss their advantages and disadvantages. [CO1]

Q. 3. Compare the three types of switching- Circuit Switching, Message Switching and Packet Switching. [CO1+CO2]

OR

Describe the wired media available for transmission of a signal. [CO1+CO2]

P.T.O.

Q. 4. (a) Explain pure-ALOHA and slotted-ALOHA systems. Give the expression for throughout for each, clearly explaining the various terms. [CO2]

(b) Explain 1-persistent, p-persistent and 0- persistent CSMA giving merits and demerits of each.

OR

(a) Differentiate between byte oriented and bit oriented protocol.. [CO2]

(b) Distinguish between Stop and Wait ARQ and Go-back-N ARQ protocol.

Q. 5. (a) Discuss the role and importance of network layer? [CO3]

(b) Discuss various classes of addressing under classful addressing. What is the subnet mask for each class?

OR

(a) What is meant by Adaptive Routing? Explain the principle of Shortest Path Routing algorithm by taking a suitable example. [CO3]

(b) Compare the principle of Leaky bucket algorithm and Token bucket algorithm to handle congestion problem.

Q.6. Write short note on [CO4]

(i) Electronic Mail (ii) Cryptography

OR

Explain how TCP connections are established and terminated in data transmission over a network. [CO4]

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