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SEAT No. _____

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SC

Sardar Patel University
Master of Computer Application SEMESTER – II Examination
PS02CMCA21: Computer Networks - I
Monday, 8th April, 2019

Time: 10:00 AM to 01:00 PM

Max Marks: 70

Q.1 Select the most appropriate answer for the following questions:

[8]

- i. _____ is a data communication system within a building, office, or campus.
- A. MAN
B. WAN
C. LAN
D. PAN
- ii. In _____ topology each node connects to exactly two other nodes, forming a single continuous circular pathway for signals through each node.
- A. Mesh
B. Ring
C. Star
D. Bus
- iii. Different computers are connected to a LAN by a cable and _____.
- A. MODEM
B. Interface card
C. Special wires
D. Telephone lines
- iv. Method of communication in which transmission takes place in both directions, but only in one direction at a time, is called _____.
- A. simplex
B. half-duplex
C. full-duplex
D. none of these
- v. Start and stop bits are used in serial communication for _____.
- A. Error detection
B. Error correction
C. synchronization
D. Slowing down the communication
- vi. Which of the following is/are example(s) of unguided media?
- A. Radiowaves
B. Microwaves
C. Infrared
D. All of these
- vii. A _____ refers to the amount time, in seconds, a signal needs to complete one cycle.
- A. period
B. frequency
C. bandwidth
D. wavelength
- viii. The full form of IEEE is _____.
- A. Indian Electrical and Electronics Engineers
B. Institute of Electrical and Electronics Engineers
C. Institute of Electrical and Electronics Enterprise
D. Institute of Electrical and Energy Engineers

Q.2 Answer the following questions (Any seven):

[14]

- i. What is bridge? How it works?
- ii. What is the main difference between circuit switching and packet switching?
- iii. What is key idea behind multiplexing?
- iv. Define : (i) Baud (ii) Bandwidth

- v. Write the differences between parallel transmission mode and serial transmission mode.
- vi. Assume that five devices are arranged in a mesh topology. How many cables are needed? How many ports are needed in each device?
- vii. Write the differences between half-duplex and full-duplex mode of communication.
- viii. Draw TCP segment header.
- ix. Write the five tuples of resource records.

Q.3

A What is computer network? What are the advantages of establishing a computer network? [6]

B Write a note of fiber optic cable. [6]

OR

B Discuss FDM and TDM in detail. [6]

Q.4

A List out different topologies. Compare any two of them giving its advantages and disadvantages. [6]

B Write a note on CSMA protocol. [6]

OR

B Write a note on LAN. [6]

Q.5

A List layers of OSI reference model. Explain any two of them. [6]

B Explain IP in brief. Draw and explain IP datagram header. [6]

OR

B What is protocol? Explain different issues while designing the layers of network. [6]

Q.6

A Explain the working of E-mail by giving example. [6]

B Write a note on DNS. [6]

OR

B Write a note on Ethernet cabling scheme. [6]

