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89 (DCCN)

[20-HKPGDEO–M4S(O)21J]

MCA 4th Semester (Old) Exam., 2020

DATA COMMUNICATION AND COMPUTER NETWORKS

[MCA (S4) 15]

Full Marks : 80

Time : 3 hours

The figures in the margin indicate full marks for the questions

1. Answer any *five* from the following questions : 2×5=10

(a) What is the role of a repeater?

(b) What are burst errors?

(c) What are multicast addresses?

(d) Give two major features of TCP.

(e) Define sockets.

(f) What is session recovery?

2. Answer any *three* from the following questions : 4×3=12

(a) Describe in brief the data flow control mechanism.

(b) Explain the process of phase modulation.

(c) Differentiate between noiseless and noisy channels.

(d) Describe the working of CSMA/CD algorithm.

3. Answer any *three* from the following questions : 6×3=18

(a) Discuss the concept of broadband and baseband LANs. Explain the characteristics of each type.

(b) What are different types of address classifications of IPv4 addresses?

(c) Explain the steps in TCP three-way handshake connections.

(d) Describe the different layers in the OSI protocol.

4. Answer any *four* from the following questions : 10×4=40

(a) Explain the peer-to-peer network briefly. Also mention two advantages and disadvantages of peer-to-peer network.

(b) What is flow and error control? Explain stop and wait ARQ which is processed in data link protocol.

(c) Mention five changes done in IPv6 in comparison to IPv4.

(d) Explain the role of FDM, TDM and CDM with reference to multiplexing.

(e) Write short notes on any *two* of the following :

(i) Circuit switching

(ii) Virtual LANs

(iii) ARP

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