CBCS SCHEME

USN | | | | | | | | | | |

20MCA13

First Semester MCA Degree Examination, June/July 2023
Computer Networks

Time: 3 hrs. Max. Marks: 100

Note: ***Answer any FIVE full questions, choosing ONE full question from each module.***

Module-1

1 a. What is a Computer Network? Explain LAN, MAN and WAN. **(10 Marks)**

b. With a neat diagram, describe the functionality of each layer of OSI model. **(10 Marks)**

OR

2 a. Explain coaxial cable and optical fiber with their applications. **(10 Marks)**

b. Explain the following digital modulation techniques:
i) FDMA ii) CDMA iii) TDMA **(10 Marks)**

Module-2

3 a. What is framing? Explain four framing methods? **(10 Marks)**

b. Explain four different error-correcting codes. **(10 Marks)**

OR

4 a. Explain characteristic and types and Ethernet. **(10 Marks)**

b. Explain the architecture of 802.11. **(10 Marks)**

Module-3

5 a. Explain distance vector routing algorithm for the following:

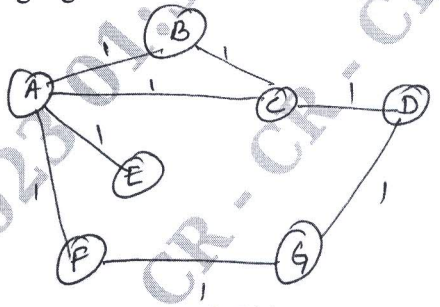

Fig.Q.5(a)

(10 Marks)

b. With a neat diagram, explain the frame format of IPV_4 header. **(10 Marks)**

OR

6 a. What is congestion control? Discuss the approaches to congestion control. **(10 Marks)**

b. Discuss about broadcast routing in network layer. **(10 Marks)**

Module-4

7 a. Explain TCP connection management with the help of neat diagram. **(10 Marks)**

b. Explain with diagram TCP header format. **(10 Marks)**

OR

8 a. Explain the concept of 3 way handshake. **(10 Marks)**

b. Explain with diagram UDP header format. **(10 Marks)**

Module-5

9 a. Explain the architecture of Email system. **(10 Marks)**

b. Write short note on: i) HTTP ii) Mobile web. **(10 Marks)**

OR

10 a. Explain architecture of world wide web. **(10 Marks)**

b. Explain domain name space in detail. **(10 Marks)**

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