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Reg. No. ☐☐☐☐☐☐☐☐

II Semester M.C.A. Degree Examination, December – 2024
COMPUTER SCIENCE
Computer Networks
(CBCS Scheme Y2K20)
Paper:2MCA3

Time : 3 Hours

Maximum Marks : 70

Instructions to Candidates :

Answer any **FIVE** from Section - A and any **FOUR** from Section -B

SECTION - A

Answer any FIVE questions . Each question carries 6 marks. (5×6=30)

1. What is computer Network? Explain different types of Computer network based in size.

2. Explain the causes of transmission impairments.

3. Explain the operation of CSMA/CD.

4. What is the transmission message for the bit stream 1101011111 using the generator polynomial $g(x) = x4+x+1$.

5. Explain Packet switching techniques for data transmission.

6. Briefly explain ICMPV4 Error Messages.

7. Explain the IPv6 data gram format with neat sketch.Mention the significance of each field.

8. Explain the service provided by the Transport Layer.

SECTION - B

Answer any FOUR questions. Each question carries 10 marks. (4×10=40)

9. With a neat diagram explain the functions of each layer in the OSI reference model. (10)

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10. a) Explain working of Pure ALOHA and slotted ALOHA protocols. (6)

   b) Explain HDLC frame Format. (4)

11. a) With neat diagram explain how the connection is established in TCP using three-way handshaking. (6)

   b) Differentiate between UDP and TCP. (4)

12. What is the purpose of DNS? Explain the steps for mapping host name to IP address. (10)

13. a) What is Mobile IP? Explain different component of Mobile IP. (6)

   b) What is Routing? Explain different categories of Routing Algorithms. (4)

14. Write short note on: (10)

   a) WWW.

   b) E-MAIL.

   c) POOLING

   d) FDMA