[Total No. of Questions - 9] [Total No. of Printed Pages - 2]

MAY-24-1050

MCA-6204 (Computer Networks)

MCA-2nd CBCS/NEP

Time : 3 Hours **Max. Marks : 60**

The candidates shall limit their answers precisely within the answer-book (40 pages) issued to them and no supplementary/continuation sheet will be issued.

Note: Attempt five questions in all, selecting one question each from Section A, B, C and D. Section E is compulsory.

Section-A

1. Explain the significance of Switching. What are different switching techniques used in computer networks? Discuss. (12)

2. What is layered architecture of computer network? What is the benefit of layered architecture? Give, in short, various layers and their functions in OSI Reference Model. (12)

Section-B

3. Describe the Go Back N protocol with neat sketch. How is it better that simple Stop-and-Wait protocol? (12)

4. What is the significance of data link layer? Explain the design issues of data link layer. (12)

Section-C

5. Explain Distance Vector routing algorithm with an example. (12)

6. What are the differences between Static Routing Algorithm and Dynamic Routing Algorithm? Give two examples of each type with justification as to why are they static or dynamic. (12)

Section-D

7. How a Connection is established in a Transport Protocol. Explain three protocol scenarios for establishing a connection. (12)

8. Is Boarder Gateway Protocol (BGP) an exterior or an interior gateway protocol? Explain BGP in detail and explain how routes are created in BGP. (12)

Section E (Compulsory)

9. Attempt all questions. (6×2=12)

   i. What are the advantages of and drawbacks of bus topology?

   ii. Explain why the cables are twisted in twisted pair wireless system.

   iii. What are the design issues of Data Link layer?

   iv. What is the significance of the network layer in the internet?

   v. What is count to infinity problem?

   vi. What are hidden terminal and exposed terminal problems?