

**M.C.A. Sem - III (Choice Based Credit System 2011 & 2012 Course) :**  
**SUMMER - 2019**

**SUBJECT : COMPUTER NETWORKS**

Day : **Saturday**  
Date : **20/04/2019**

**S-2019-2170**

Time : **02.00 PM TO 05.00 PM**  
Max. Marks : **100**

**N. B. :**

- 1) Attempt **ANY FOUR** questions from section – I and attempt **ANY TWO** questions from section – II.
- 2) Figures to the right indicate **FULL** marks.
- 3) Answers to both the sections should be written in **SAME** answer books.

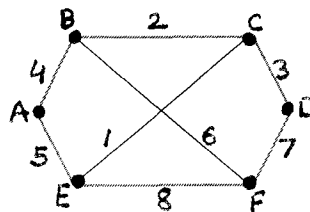
**SECTION - I**

- Q. 1** a) Differentiate between connection oriented and connectionless services. (08)  
b) Differentiate between LAN, MAN and WAN. (07)
- Q. 2** Explain the types of transmission media and their characteristics. (15)
- Q. 3** What is the importance of congestion control algorithms? Explain load shedding and fitter control. (15)
- Q. 4** Differentiate between Static and Dynamic Routing algorithms. Explain Shortest Path Routing in detail. (15)
- Q. 5** Define MANET. Explain any one of Dynamic Routing protocols for MANAET. (15)
- Q. 6** Write short notes on **ANY THREE** of the following: (15)
- a) FTP
  - b) MIME
  - c) ICMP
  - d) 4G Networks

**SECTION - II**

- Q. 7** ABC Company with IP address: 172. 130. 120. 16 is planning to extend their business in 20 cities. Answer the following questions: (20)
- a) What is the benefit of subnetting for ABC company?
  - b) What would be new subnet mask?
  - c) List all the subnet IDs.
  - d) Give the range of all host IDs in different subnet IDs.
- Q. 8** Explain different types of switching techniques with appropriate examples. (20)
- Q. 9** Consider the network given in following diagram. Distance vector routing is used and following vectors have just come in to router C: (20)

From B (5, 0, 8, 12, 6, 2)  
From D (16, 12, 6, 0, 9, 10)  
From E (7, 6, 3, 9, 0, 4)



Measure the delays to B, D, E are 6, 3 and 5 respectively, what is C's new routing table.

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