

**I.M.C.A. SEM-VII (2014 Course) CBCS : SUMMER - 2019**

**SUBJECT : COMPUTER NETWORKS**

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

**S-2019-2138**

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** Classify networks as LAN, MAN and WAN. Differentiate between LAN, MAN and WAN on the basis of area used, technology used and different applications. **(15)**
- Q.2** a) Differentiate between connection oriented and connection less services. **(07)**  
b) Differentiate between synchronous and asynchronous transmission. **(08)**
- Q.3** What are different switching techniques? What are advantages and disadvantages of packet switching? **(15)**
- Q.4** Explain link state routing protocol in detail. **(15)**
- Q.5** What is the functionality of application layer? Explain at least two protocols used in application layer. **(15)**  
(Hint : FTP, SMTP, SNMP, MIME, HTTP)
- Q.6** Write short notes on **ANY THREE** of the following: **(15)**  
a) Domain Name Service  
b) Mobile – IP  
c) Ethernet  
d) 1G, 2G and 3G

**SECTION - II**

- Q.7** What is Mobile Ad-hoc Networks (MANET)? What are challenges for MANET? Explain any one routing algorithm used in MANET. **(20)**
- Q.8** Design a network layout for XYZ company which is operating in multiple cities. Suggest which class address you will use for your company network. Also suggest the choice of topology and connecting devices you will use for your company. **(20)**
- Q.9** What is the functionality of Transport layer? Explain transport layer protocols in detail. **(20)**

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