

**I.M.C.A. SEM-VII (2014 COURSE) CBCS : SUMMER - 2018**  
**SUBJECT: COMPUTER NETWORKS**

Day : **Monday**  
Date : **30/04/2018**

**S-2018-1773**

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

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**N.B.:**

- 1) Attempt any **FOUR** questions from Section - I.
  - 2) Attempt any **TWO** questions from Section - II.
  - 3) Figures to the right indicate **FULL** marks.
  - 4) Answers to both the sections should be written in **SEPARATE** answer book.
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**SECTION-I**

- Q.1** Why layered architecture is preferred for design of network architecture? (15)  
Explain TCP/IP layered architecture in detail.
- Q.2** a) Differentiate between connection oriented and connectionless services. (08)  
b) Compare Virtual Circuit and Datagram Subnet (07)
- Q.3** Discuss the functionality and applications of Frequency Division Multiplexing (FDM) and Time Division Multiplexing (TDM) (15)
- Q.4** What is the importance of congestion control algorithms? Explain load shedding and jitter control. (15)
- Q.5** Write short notes on any **THREE** of the following: (15)  
a) Mobile Adhoc Network (MANET)  
b) User Datagram Protocol (UDP)  
c) Design issues in Wireless Sensor Network  
d) Data Encryption

**SECTION – II**

- Q.6** Find the Class of each IP address given below, give the suitable explanation for your answer: (20)  
a) 224.16.19.25  
b) 198.16.240.80  
c) 125.250.240.70  
d) 135.11.78.56  
e) 255.255.255.255
- Q7.** Design network layout for your college. Suggest different topologies for your college network with their advantages and disadvantages. (20)
- Q.8** a) Explain the concept of 4G networks. (10)  
b) Explain the Bluetooth architecture. (10)

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