

**B.Tech. SEM -V Info. Tech. 2014 Course (CBCS) : WINTER - 2018**  
**SUBJECT-DATA COMMUNICATION & NETWORKS**

Day: Saturday  
Date: 24/11/2018

**W-2018-2413**

Time: 02.30 PM TO 05.30 PM  
Max. Marks: 60

**N.B:**

- 1) All questions are **COMPULSORY**.
- 2) Figures to the right indicate **FULL** marks.
- 3) Use of non-programmable calculator is **ALLOWED**.
- 4) Assume suitable data if necessary.

**Q.1** Distinguish between Analog and Digital communication with suitable example. Discuss Digital Communication system in detail. (10)

**OR**

**Q.1** Explain the effect of Attenuation, Limited band and Data rate limits on digital transmission. (10)

**Q.2** List and explain Wireless transmission media with example in detail. (10)

**OR**

**Q.2** State the significance of Switching in commutation networks. Briefly describe Circuit switching, Message switching and Packet switching with suitable example. (10)

**Q.3** Summarize the relative advantages and disadvantages of FDM, TDM, and STDM. (10)

**OR**

**Q.3** Describe the benefits of Spread Spectrum. With the help of diagram explain FHSS and DSSS. (10)

**Q.4** With the help of diagram describe the functions of various layers of OSI model. (10)

**OR**

**Q.4** Write the functions of Hub, Bridge, Router, Gateway, Repeater and NIC. (10)

**Q.5** Draw and explain the frame format of IPv4, also explain the concept of fragmentation in detail. (10)

**OR**

**Q.5** Write a short note on:  
i) Multicast Routing  
ii) Concepts of OSPF. (10)

**Q.6** What is Congestion? List different factors of congestion? Explain congestion prevention policies for transport layer. (10)

**OR**

**Q.6** How Domain Naming System functions for Internet? Explain Resource records and Name server for the Domain Name System. (10)