

**B.TECH. SEM -V INFO. TECH. 2014 COURSE (CBCS) : WINTER -
2017**

SUBJECT: DATA COMMUNICATION & NETWORKS

Day: **Saturday**
Date: **13/01/2018**

W-2017-2150

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) Draw neat diagrams **WHEREVER** necessary.

Q.1 What is Data Communication? Draw a block diagram of Data communication system and explain its components. **(10)**

OR

Q.1 Compare ASK, FSK, PSK techniques. **(10)**

Q.2 Explain in detail the classification of transmission media for Data communication. **(10)**

OR

Q.2 Write the comparison between Circuit Switching, Packet switching and Message switching. **(10)**

Q.3 Differentiate between the following: **(10)**
i) Full-duplex and Half-Duplex modes
ii) Asynchronous and Synchronous transmission

OR

Q.3 What is multiplexing? Explain Frequency Division Multiplexing and Time Division Multiplexing. **(10)**

Q.4 With the help of a diagram explain each and every function performed by each layer in OSI reference model. **(10)**

OR

Q.4 Explain various methods of framing in data link layer. Describe frame format of Point-to-Point protocol (PPP). **(10)**

Q.5 What is ARP and explain its functioning at network layer? What is RARP and why it is used at Network layer? **(10)**

OR

Q.5 Name different Routing algorithms and write a note on any two. **(10)**

Q.6 Describe with examples the three mechanisms by which congestion control is achieved in TCP. **(10)**

OR

Q.6 Write short notes on: **(10)**
i) Domain Name System (DNS).
ii) Simple Mail Transfer Protocol (SMTP).