

**B.TECH SEM – VII (2007 COURSE) (ELECTRONICS ENGG.) :**  
**WINTER - 2017**

**SUBJECT: COMPUTER NETWORKS**

Day: **Friday**  
Date: **19/01/2018**

Time: **02.30 PM TO 05.30 PM**  
Max Marks. **80**

**W-2017-2581**

**N.B.**

- 1) **Q. No. 1 and Q. No. 5 are COMPULSORY.** Out of remaining questions attempt any **TWO** from each section
- 2) Answers to both the sections should be written in the **SEPARATE** answer books.
- 3) Draw neat and labeled diagram **WHEREVER** necessary
- 4) Figures to the right indicate **FULL** marks.
- 5) Assume suitable data if necessary.

**SECTION - I**

- Q.1**
- a) How cost effective resource sharing is possible in computer networks? **(05)**
  - b) What are the different data encoding techniques? **(05)**
  - c) What is application of bridges & LAN switches? **(04)**
- Q.2**
- a) Draw the OSI architecture. Write importance of each layer. **(07)**
  - b) What are the requirements of network design? Discuss types of connectivity in the network. **(06)**
- Q.3**
- a) What are the hardware building blocks used for constructing a network? **(07)**
  - b) What is bit oriented protocols (HDLC) & clock based framing (SONET)? **(06)**
- Q.4**
- a) Elaborate the concept of virtual circuit switching. **(07)**
  - b) Describe the cell switching (ATM) which deserves special attention. **(06)**

**SECTION - II**

- Q.5**
- a) Describe the concept of Latency & throughput issues. **(05)**
  - b) Draw the TCP state – transition diagram. **(05)**
  - c) What is queuing discipline that governs how those are buffered in transmission? **(04)**
- Q.6**
- a) Illustrate the complete RPC mechanism using block diagram. **(07)**
  - b) ‘The internet’s user datagram protocol (UDP) is an example of a transport protocol’, Justify. **(06)**
- Q.7**
- a) What are the different issues in resource allocation & congestion control? **(07)**
  - b) What are the different mechanisms in congestion avoidance? **(06)**
- Q.8**
- a) Describe the concept of network management (SNMP). **(07)**
  - b) Write the significance of resource allocation for multimedia applications **(06)**