

B.SC. (I. T.) SEM. - III (2011 COURSE) : WINTER - 2017
SUBJECT: COMPUTER NETWORKS

Day: Saturday
Date: 16/12/2017

Time: 10.00 am to 12.00 Noon
Max. Marks: 40

W-2017-0870

N.B:

- 1) Attempt **ANY FIVE** full questions.
 - 2) Figures to the right indicate **FULL** marks.
 - 3) Make assumptions where necessary, clearly stating the assumption.
 - 4) Draw neat diagrams **WHEREVER** necessary.
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- Q.1 a)** Clearly distinguish between circuit switching, packet switching and message switching. Give one application area for each. **(05)**
- b)** List the layers of the ISO-OSI model and the corresponding layers of the TCP/IP model. **(03)**
- Q.2** Explain the various LAN topologies highlighting their advantages, disadvantages and application areas. **(08)**
- Q.3 a)** Explain the CSMA/CD protocol for media access as implemented in standard Ethernet (IEEE 802.3). **(05)**
- b)** Can this protocol (CSMA/CD) be used for wireless communication? Briefly explain. **(03)**
- Q.4 a)** What are the advantages and disadvantages of breaking up a message into packets? **(04)**
- b)** Explain UDP and its application. **(04)**
- Q.5** Compare and contrast Distance Vector Routing with Link state Routing. **(08)**
- Q.6 a)** Explain the process by which the IP address of a URL such as www.google.com is obtained by a computer on the Internet. **(05)**
- b)** What is a TCP port? Why is a port address required in addition to an IP address? **(03)**
- Q.7** Write short notes on **(ANY TWO)**: **(08)**
- a) IPv6
 - b) 3- way handshake in TCP
 - c) Sliding Window Protocol
 - d) Satellite Communication