

III B. Tech II Semester Supplementary Examinations, November-2018
COMPUTER NETWORKS
(Common to Computer Science Engineering and Information Technology)

Time: 3 hours

Max. Marks: 70

- Note: 1. Question Paper consists of two parts (**Part-A** and **Part-B**)
 2. Answering the question in **Part-A** is compulsory
 3. Answer any **THREE** Questions from **Part-B**

PART -A

- 1 a) Match the following to one or more layers of the TCP/IP protocol suite: [4M]
 - i) Creating a user datagram
 - ii) Responsibility for handling frames between adjacent nodes
 - iii) Transforming bits to electromagnetic signals
- b) Distinguish between synchronous and statistical TDM. [4M]
- c) What is the meaning of P/F field in HDLC control field? [3M]
- d) What is ALOHA? Compare different ALOHA protocols. [4M]
- e) Which Ethernet standard supports full duplex transmissions and how? [3M]
- f) What is a URI? What are its components? IS URL same as URI. [4M]

PART -B

- 2 a) What is a network? Explain the different parameters for measuring the performance of a network? [6M]
- b) Explain OSI reference architecture in detail. [10M]
- 3 What is Multiplexing? List and explain three multiplexing techniques in detail. [16M]
- 4 a) Explain Sliding window protocols in detail. [10M]
- b) Calculate the polynomial checksum for the following frame and generator [6M]
 Frame: 1101011011 and Generator: $x^4 + x + 1$
- 5 a) Explain different controlled access protocols in detail. [6M]
- b) Compare Virtual circuit and Datagram subnets. [4M]
- c) Explain Flooding algorithm. [6M]
- 6 a) Explain IEEE 802.3 protocol and its frame format. [8M]
- b) Explain the commonly used media in Ethernet –based LAN in detail. [8M]
- 7 a) Explain web client (browser) architecture. [6M]
- b) What is HTTP? Explain Nonpersistent and Persistent connections of HTTP. [10M]
