Code No: **R31052**   **R10**   **Set No. 1**

III B.Tech I Semester Supplementary Examinations, October/November - 2017
COMPUTER NETWORKS
(Common to Computer Science Engineering and Information Technology)

Time: 3 hours   **Max. Marks: 75**

Answer any FIVE Questions
All Questions carry equal marks
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1	a)	What are the components of a data communication system?	[4M]
	b)	What are the different types of addresses used by a computer network? What is the need for multiple addresses?	[6M]
	c)	What is the difference between client server communication and peer to peer communication?	[5M]
2	a)	What are the differences between datagram and virtual circuit communications?	[7M]
	b)	What is the need for multiplexing and demulitplexing? Compare different multiplexing techniques	[8M]
3	a)	What are the differences between software based and hardware based error control.	[5M]
	b)	How the checksum is generated using CRC method. Write the algorithm. What should be the properties of a generator polynomial?	[10M]
4	a)	What is piggybacking? How it is done. What are the limitations of it?	[6M]
	b)	Explain the working of a PPP protocol.	[9M]
5	a)	What are the different techniques for controlled channel access? Explain them.	[10M]
	b)	What is the efficiency of Pure ALOHA and Slotted ALOHA? How do you determine the efficiency?	[5M]
6	a)	Explain the fields of an IEEE 802.11 MAC frame.	[10M]
	b)	What are the advantages and disadvantages of a Manchester encoding?	[5M]
7	a)	What are the unique properties of a Satellite communication?	[6M]
	b)	What is the logic behind low orbit, medium orbit and geosynchronous orbit satellites?	[5M]
	c)	Compare Fiber and Satellites for long distance communication.	[4M]
8	a)	What is the need for switching? How to you avoid loops in connecting networks using bridges.	[7M]
	b)	What are the different interconnecting devices? What are their properties?	[8M]

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