Code No: **R32041** **R10** **Set No. 1**

III B.Tech II Semester Supplementary Examinations, April – 2017
COMPUTER NETWORKS
(Common to Electronics and Communications Engineering **and** Electronics and Computer Engineering)

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

Answer any FIVE Questions
All Questions carry equal marks
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1	a)	Define and explain the following terms: i. UDP Datagram ii. Network topology iii. MTU (Maximum Transfer Unit) iv. Packet.	[8M]
	b)	Discuss various network applications and goals in detail.	[7M]
2	a)	What are the services provided by the physical layer?	[6M]
	b)	Explain broad band ISDN in detail.	[9M]
3	a)	Draw, and explain about HDLC protocol.	[8M]
	b)	What is Hamming Distance? What must be hamming distance of single bit error detecting code?	[7M]
4	a)	Explain in detail bout the frame format of 802.11 with the role of access points in a wireless communication.	[7M]
	b)	Why is it important for protocols configured on top of the Ethernet to have a length field in their header, indicating how long the message is?	[8M]
5		Define route. Why routing algorithm is required. Routes can be predetermined and then use them when required (or) Routes can be determined when needed and use them immediately. First method is proactive and second method is reactive. Which one is preferred for wired networks? Justify your answer.	[15M]
6	a)	Describe the link state routing algorithm with an example.	[6M]
	b)	What is pipelining? What are its advantages? What are the issues that raises when pipelining frames over an unreliable communication channel? Mention the approaches to deal with these errors?	[9M]
7		Describe the connection establishment and connection release in TCP and explain how TCP provides reliability using error control.	[15M]
8	a)	Explain the simple mail transfer protocol in detail.	[8M]
	b)	Explain in brief the DES algorithm.	[7M]

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