Code No. 6078 / M

FACULTY OF INFORMATICS

B.E. 2/4 (IT) II – Semester (Main) Examination, June 2014

Subject : Data Communications

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

Note: Answer all questions from Part-A. Answer any FIVE questions from Part-B.

PART – A (25 Marks)

1	Encode the bit pattern p = 101101 using Manchester coding and NRZ – L coding.	2
2	Distinguish PCM and DM.	2
3	List the three types of ARQ mechanisms and explain why error control is needed.	2
4	Briefly explain the three modes in HDLC.	3
5	Differentiate FDM and TDM.	2
6	Briefly explain about ATM logical connection.	3
7	Write short notes on MAC sub layer.	3
8	What is CSMA / CD? Why is it needed in different Ethernets?	3
9	Differentiate scatternet and piconet.	2
10	Explain about frequency reuse in cellular networks.	3

PART – B (50 Marks)

11	a)	Explain the protocol architecture of TCP/IP.	6
	b)	What are the advantages of optical fiber communications?	4
12	a)	Explain cell relay in detail.	6
	b)	Write notes on ADSL.	4
13	a)	Explain the sliding-window flow control technique in detail.	6
	b)	Define ARQ and explain parity check error detection technique with an example.	4
14	a)	Compare circuit switching, virtual circuit switching and datagram packet switching with the help of event timing diagram.	6
	b)	Explain synchronous transmission.	4
15		Explain switched, fast and Gigabit Ethernets.	10
16	a)	Explain Bluetooth architecture and layers.	7
	b)	Explain the frame format of IEEE 802.11.	3
17		Write short notes on :	
	a)	Layer 2 and layer 3 switches	4
	b)	3 G cellular networks	3
	c)	Statistical TDM	3

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