Seat No._____

GANPAT UNIVERSITY

B. TECH. SEMESTER VI (EC), ELECTRONICS & COMMUNICATION ENGINEERING EXAMINATION, May/June-2014

REC 602:- COMPUTER NETWORKS

TIME: 3 HOURS TOTAL MARKS: 70

INSTRUCTION:-

1. Attempt all questions.
2. Answers to the two sections must be written in separate answer books.
3. Figures to the right indicate full marks.
4. Assume suitable data, if necessary.

SECTION-I

1	(A)	Draw the OSI Model and list the function of each layer.	8
	(B)	Draw the Ethernet Frame and Differentiate the IP and TCP protocol.	4
		OR	
1	(A)	Define LAN, MAN and WAN. Also draw the ATM model and explain the each layer in detail.	8
	(B)	Explain the frame relay? Also Differentiate the OSI model and TCP\IP model.	4
2	(A)	Find the total number of address, first address and Last address for IP address **122.122.122.122/11.**	4
	(B)	Define cipher text and plaintext. Also explain the Substitution ciphering using suitable example.	4
	(C)	Define protocol and subnet. Calculate the CRC code for data: **110101011** and generator polynomial is **10111.**	3
		OR	
2	(A)	Write short note on W.W.W.	4
	(B)	Explain the E-mail Services using SMTP protocol.	4
	(C)	Explain the Pure Aloha and slotted Aloha Protocol.	3
3	(A)	What is silly window syndrome? Explain solution of it at sender and receiver both.	6
	(B)	Explain the Congestion control using slow start and additive increase in TCP.	6

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SECTION-II

4	(A)	State the advantages and disadvantages of stop and wait flow control.	4
	(B)	Cat-5 cables can carry more data over a longer distance than cat-3. Discuss.	3
	(C)	Write short note on PSTN	5

OR

4	(A)	Discuss different communication modes in HDLC?	4
	(B)	Discuss Bluetooth.	4
	(C)	What are timers? What is their usefulness in data communication? Explain with suitable example.	4
5	(A)	Define: ISM bands, Throughput, 10BASE5, IR waves, PPP	5
	(B)	Compare coaxial cable and twisted pair cable.	6

OR

5	(A)	What is message switching? How does it work?	4
	(B)	Describe the Go-Back_ N ARQ technique.	4
	(C)	Compare bridge and router.	3
6	(A)	Draw the IP header format and explain the each field in detail.	6
	(B)	Explain the Hierarchical routing algorithm using suitable example.	6

END OF PAPER

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