	Utech
Name:	<u>A</u>
Roll No.:	A Great of Exercising 2nd Explored
Invigilator's Signature :	

2013

ADVANCED NETWORKING AND COMMUNICATION

Time Allotted: 3 Hours Full Marks: 70

The figures in the margin indicate full marks.

Candidates are required to give their answers in their own words as far as practicable.

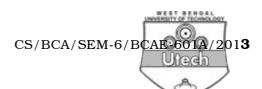
GROUP - A

(Multiple Choice Type Questions)

- 1. Choose the correct alternatives for any ten of the following: $10 \times 1 = 10$
 - i) Shanon Capacity determines
 - a) noise present in a channel
 - b) highest data rate in a noisy channel
 - c) whether channel is noiseless
 - d) all of these.

6027 [Turn over

ii)	The	hamming distance l	oetween	10101 and 11110 is
	a)	2	b)	3
	c)	4	d)	1.
iii)) After a message is decrypted, it is called			is called
	a)	Plain text	b)	Cipher text
	c)	Crypto text	d)	Crypto nite.
iv)	iv) Identify the most suitable description fo			
	a)	Error control is an	activity	that manages deadlock.
	b) Error control is an advanced form of parity bit.			
	c)	Error control is a Hub.	sub-fui	nction of a modem and
	d)	Error control is n damage of data.	eeded to	o guard against loss or
v)	The	number of network	in Class	A addressing system is
	a)	2^8	b)	2^{16}
	c)	2^{32}	d)	2^{24} .
6027		2		



- vi) Flooding in networks and data communication has certain properties. Which of the options below is a property of flooding?
 - a) All possible routes are tried
 - b) All paths are loaded
 - c) All nodes are linked
 - d) Cannot be used to set up virtual circuit.
- vii) The synchronous modems are more costly than the asynchronous modems because
 - a) they produce large volume of data
 - b) they contain clock recovery circuits
 - c) they operate with a larger bandwidth
 - d) none of these.
- viii) In which type of switching do all the packets of a message follow the same channels of a path?
 - a) Datagram packet switching
 - b) Virtual packet switching
 - c) Message switching
 - d) None of these.



ix) IEEE 802.5 is

- a) Token bus
- b) Ethernet
- c) Token ring
- d) Voice data transmissions.
- x) In Ethernet CSMA/CD, the special bit sequence transmitted by media access management for collision handling is called a
 - a) preamble
- b) port-amble

c) jam

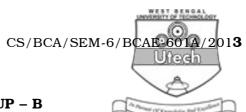
- d) none of these.
- xi) Which of the following protocols does not guarantee delivery, preservation of sequence or protection against duplication?
 - a) HTTP

b) FTP

c) UDP

d) SMTP.

6027 4



GROUP - B

(Short Answer Type Questions)

Answer any three of the following.

 $3 \times 5 = 15$

- 2. Explain Delta Modulation with proper example. Mention its limitations. 3 + 2
- What is IP addressing? What are the classes of IP 3. addressing? What is the difference between static and dynamic IPs?
- 4. Define Cookies.
- 5. Differentiate between Narrowband ISDN and Broadband ISDN.
- 6. Briefly explain FDM process.

GROUP - C

(Long Answer Type Questions)

Answer any *three* of the following. $3 \times 15 = 45$

- What is the need of Flow control? 7. a)
 - Describe the mechanism of Go Back n ARQ protocol b) through suitable for (i) lost frame and (ii) lost acknowledgement.

6027 5 [Turn over

- c) Compare Stop and Wait ARQ and Selective Repeat ARQ protocol.
- d) A bit word 1011 is to be transmitted. Construct the even parity seven-bit hamming code for this data.

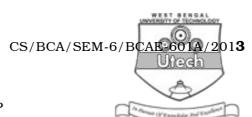
2 + 5 + 3 + 5

- 8. a) Why is Modulation useful for data transmission? What is Sampling?
 - b) Draw the Digital Signal Encoding for Polar RZ, AMI, Manchester, Differential Manchester coding for 110010101100 and write down the procedure in brief.
 - c) Define Bit rate and Baud rate.

2 + 2 + 8 + 3

- 9. a) Compare between Asynchronous TDM and Synchronous TDM with proper diagram.
 - b) Briefly explain Virtual Packet switching network.
 - c) Briefly define Repeater, Bridge and Router. 5 + 4 + 6

6027



- 10. a) What is MAC address?
 - What is Channelization? Briefly explain CDMA method. b)
 - Briefly explain Token passing Ring network approach as c) controlled assess mechanism.
 - What is Hamming distance? 1 + 2 + 5 + 5 + 2d)

11. Write short note on any *three* of the following :

 3×5

- **SMTP** a)
- Virtual LAN b)
- Fragmentation c)
- d) Leaky Bucket Algorithm
- ALOHA. e)