## CS/BCA(O)/ODD/SEM-5/BCA-501/2019-20



## MAULANA ABUL KALAM AZAD UNIVERSITY OF TECHNOLOGY, WEST BENGAL

Paper Code: BCA-501

PUID: 05144 ( To be mentioned in the main answer script )

## DATA COMMUNICATION & COMPUTER NETWORKS

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 )

- Choose the correct alternatives for any ten of the following:
  - i) TCP is a/an
    - a) reliable connection oriented protocol
    - b) unreliable connection oriented protocol
    - reliable connectionless protocol
    - d) unreliable connectionless protocol.
  - ii) Microwaves are used for
    - a) unicast communication
    - b) multicast communication
    - c) both (a) and (b)
    - d) none of these.

iii)	UD	P belongs to					
	a)	network layer	b)	transport layer			
	c)	Mac layer	d)	data link layer.			
iv)							
	a)	128-191	b)	190-220			
	c)	192-223	d)	190-223.			
v)							
	<ul> <li>a) hardware address to hardware address</li> </ul>						
	b)	· • •					
	c)	) IP network address to hardware address					
	d)	none of these.					
vi)	Fra	ming is done in		. 1			
	a)	network layer	p)	transport layer			
	c)	data link layer	d)	none of these.			
vii)							
	a)	IEEE 802•3	b)	IEEE 802•5			
	c)	IEEE 802•6	d)	none of these.			
viii)	GS:	GSM stands for					
	a)	Good Service Management					
	b)	Global Service Management					
	c)	Good Sender Memory					
	d)	Global System for M					
ix)		ich topology featu	res	a point-to-point	line		
		afiguration?	L.	Dim -			
	a)	Mesh	b)				
	c)	Star	•	All of these			
X)		After a message is decrypted, it is called					
	a)	plain text	b)	•			
	c)	crypto text	d)	none of these.			

1)	xi)	Keyboard is an example of which of the following?					
'n)		a) Simples	ĸ	b)	Half Dup		
×q		c) Full Du	plex	d)	None of t		
$\tilde{j}$	xii)	MODEM sta	inds for	·			
		a) MODul	o Encodin <sub>i</sub>	g Mecha	anism		
ı		b) MOdula	ator DEMo	dulator			
√ .		c) Maxima	ally Optimi	zed DE	Modulator	•	•
V		d) None of	f these.				
y (I			GROU	P – B			
り N		( Short	Answer T	ype Qu	estions)		
)		Answer	any three	of the f	following.	$3 \times 5$	5 = 15
2.	a)	Compare be	etween OS	I Model	and TCP/	IP refe	_
		Model.					4
ン	b)	What is MA					
3.		What is IP addressing? What are the classes of IP					
		addressing? What do you mean by classless					
		addressing? 2+2+1  Explain the transmission characteristics of fiber optics.					-26-
4.							
5.		Encode the bit stream 01001110 using NRZ-L, NRZ-I encoding.					
6.	Wh	at is RSA?	How does i	t work	,	1	1 + 4
			GROU		antions \		
		Answe	<b>Answer T</b> r any <i>three</i>	of the	following.		5 = 45
7.	a)	Discuss the	e frame for	mat of	802.4 LAN	•	4
•	b)	Given a bar	ndwidth of	5000 1	Hz for an 8	3-PSK	signal,
	-,	what are th			oit rate?		2 + 2
	c)	Compare	between	BSC	protocol	and	HDLC
	<b>~</b> 1	protocol.			,		4
	d)	What is pig	gy backing	3.5			3
	-,			3		ΙΤι	ırn over
	**-5322/5(O)						

8.	a)	Explain the Stop and Wait protocol. 4
	b)	What is circuit switching? How does it differ with message switching? 3 + 2
	c) .	Briefly define Repeater, Bridge and Router. 2 + 2 + 2
9.	a)	Encode the bit sequence 0101 using ASK, FSK, PSK. 2 + 2 + 2
	b)	Briefly describe the priority access methods of Token Ring. http://www.makaut.com 5
	c)	Compare FDM and TDM. 4
10.	a)	Briefly describe the function of Data Link Layer and Network Layer of OSI Model. 3 + 3
	<b>b</b> )	What are DTE and DCE? Explain the DTE and DCE interface. 2 + 4
	c)	What is baud rate?
	d)	What are Private Key and Public key? 2
11:	Wri	te short notes any <i>three</i> of the following: $3 \times 5$
	a)	Leaky Bucket Algorithm
	b)	GEO
	c)	ALOHA
	d)	Topology
	<b>e</b> )	PCM.