		ROLL NO.	~
Code: AC12/AT1	10 Subject: DATA	COMMUNICATIONS AND NETWO	Chr
	AMIETE - CS/IT	(OLD SCHEME)	100 L
ROLL NO. ROLL NO. Code: AC12/AT10 Subject: DATA COMMUNICATIONS AND NETWO AMIETE – CS/IT (OLD SCHEME) Time: 3 Hours DECEMBER 2011 Max. Marks: 100 NOTE: There are 9 Questions in all. • Please write your Boll No. at the space provided on each page immediately			
 after receiving t Question 1 is continued in the space processor The answer show Minutes of the of Minutes of the reminutes of the reminutes for the reminutes of the	our Roll No. at the space g the Question Paper. ompulsory and carries 20 m covided for it in the answer heet for the Q.1 will be commencement of the exam- naining EIGHT Questions es 16 marks.	narks. Answer to Q.1 must be written book supplied and nowhere else. collected by the invigilator after 45	SIM
Q.1 Choose the	e correct or best alternative	e in the following:	(2×10)
a. The tran	unsmission medium that carri	es the message is referred to as the	
(A) ser(C) Pro	6	(B) communication channel(D) Gateways	
b. Data is	s transmitted using light throu	ugh a cable.	
	visted Pair bre Optic	(B) Coaxial Cable(D) Microwave	
	Which wireless standard is widely used to connect computers to each other and to the Internet?		
(A) IEE(C) Blu	EE 802.11 ueband	(B) RJ45(D) Broadband	
d. Each co	Each computer on the Internet has a unique numeric address called		
	omain address Address	(B) Protocol Address(D) Web Address	
e. In OSI r	network architecture, the rou	ating is performed by	
	etwork Layer nysical Layer	(B) Transport Layer(D) Session Layer	
f. Which c	f. Which of the following performs modulation and demodulation?		
(A) Sat (C) Coa	atellite Daxial Cable	(B) Modem(D) None of the above	

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		ROLL NO.	JETWO HILBOULL
Code: AC12/AT10	Subject: DATA COM	MUNICATIONS AND N	JETWO CHA
g. SONET stands	for		00
(B) Synchrono	us On-line Network and A us Optical Network and A perator Network and Autor e above	synchronous Transfer Mo	
h. FDDI is a toker	n Based LAN standard dev	reloped by	
(A) ANSI(C) ISO	· · · ·	IEEE CCITT	
i. Telephone Syst	ems may be classified as		
(A) simplex an	d asymmetrical (B)	duplex and asymmetrical	

- j. A Network that provides a constant bandwidth for the complete duration of message transfer is a
 - (A) Circuit Switched Network

(C) duplex and symmetrical

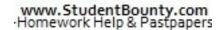
- (C) Cell Switched Network
- (B) Packet Switched Network

(D) simplex and symmetrical

(D) Virtual Private Network

Answer any FIVE Questions out of EIGHT Questions. Each question carries 16 marks.

Q.2	a.	Explain with the help of a diagram the layered architecture of TCP/IP model. (8)		
	b.	What is multiplexing? Explain the functioning of frequency divisionmultiplexing with the help of a suitable diagram.(8)		
Q.3	a.	What is the significance of line coding? Discuss various line coding schemes with relavant waveforms. (8)		
	b.	Explain guided transmission media. Mention the characteristics that distinguish optical from twisted pair or coaxial cable. (8)		
Q.4	a.	Explain timing recovery for synchronous services in peer-to-peer protocols. (8)		
	b.	Describe HDLC protocol. Explain the various types of frames associated with it. (8)		
Q.5	a.	Explain the working of CSMA. Discuss the difference between 1-persistent and non-persistent CSMA. (8)		
	b.	Compare IEEE standards 802.3 and 802.4 with special reference to frame formats. (8)		
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- StudentBounty.com **Q.6** a. Explain in detail the difference between Connectionless Packet Switching and Virtual Circuit Packet Switching. b. Explain arrivals and departures of packets in a FIFO system using:-Little's formula (i) (ii) M/M/1 Queue (8)
- a. Why Internet Protocol is known as best effort delivery service? Explain the **0.7** various fields of IP datagram in detail. (8)
 - b. Compare multicast routing protocols used in TCP/IP. (8)
- **Q.8** a. With the help of a block schematic, explain the architecture of RSVP in detail. Explain features of reservation merging. (8)
 - b. Explain the features of ATM adaptation layers (AAL1 to AAL5). Explain UNI signalling. (5+3)
- Q.9 Write Short Notes on the following:
 - (i) **PNNI** Routing
 - (ii) Integrated services in internet
 - (iii) SONET Frame Structure
 - (iv) Error Detection

 (4×4)

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