2/18/12 Code: A-20

Diplete - ET/CS (OLD SCHEME)

Code: DE21 / DC11 Subject: DATA COMMUNICATION & NETWORKS Time: 3 Hours Max. Marks: 100

DECEMBER 2009

NOTE: There are 9 Questions in all.

- Question 1 is compulsory and carries 20 marks. Answer to Q.1 must be written in the space provided for it in the answer book supplied and nowhere else.
- Out of the remaining EIGHT Questions answer any FIVE Questions. Each question carries 16 marks.

Choose the correct or the be	(2x10)			
a. TCP/IP protocol has	independent layers			
(A) 7 years	(B) 3 years			
(C) 5 years	(D) 9 years			
In stop-and-wait ARQ, ARQ stands for				
(A) Automatic reply reques	t (B) Automatic repeat request			
(C) Acknowledgement req	uest (D) Automatic request repeat			
c. Terminator is used in	topology			
(A) Mesh	(B) Star			
(C) Ring	(D) Bus			
d. Cable television uses				
(A) FDM	(B) TDM			
(C) Synchronous TDM	(D) Statistical TDM			
e. ATM is also called				
(A) Frame Relay	(B) Data Relay			
(C) Cell Relay	(D) Protocol Relay			
f. URL stands for				
(A) Unique Resource locate	or (B) Uniform Resource locator			
(C) Universal Resource loc	ator (D) Uninterrupted Resource local	ntor		
g. Which of the following is no	Which of the following is not a modulation technique?			
(A) ASK	(B) MSK			
(C) PSK	(D) FSK			

h. Data transmission in either direction, one direction at a time is

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		(A) Full Duplex(C) Simplex	(B) Half Duplex(D) None of the above				
	i.	DTE stands for					
		(A) Data Terminal Equipment(C) Digital Terminal Equipment	(B) Data Transmission Equipment(D) Digital Transmission Equipment				
	j.	The optimum frequency range for satellite transmission is					
		(A) 2 GHz – 40 GHz (C) 30 MHz – 1 GHz	(B) 1 GHz – 10 GHz (D) 10 GHz – 100 GHz				
Answer any FIVE Questions out of EIGHT Questions. Each question carries 16 marks.							
Q.2	a.	What is OSI Reference model? Briefly	y discuss the various layers in the model.		(8)		
	b.	Briefly describe the key elements of a	communication model along with a neat of	liagram.	(8)		
Q.3		a. With any communication system, the received signal will differ from the transmitted signal due to vario transmission impairments. Discuss these impairments in detail. (6)					
	b.	Discuss the working principle of optic distinguish it from twisted pair and co-	cal fiber. With the help of a neat sketch. A axial cable.	Also discuss (10)	its characteristics, which		
Q.4	a.	Briefly discuss the HDLC frame struct	ure along with a neat diagram.	(8)			
	b.	What is a bridge? Briefly discuss the v	various functions performed by a bridge.		(8)		
Q.5	a.	What are the important requirements s	specific to the wireless LAN environments	s?	(8)		
	b.	Define multiplexing. Also explain FDM	I along with its characteristics.	(8)			
Q.6	a.	What are the advantages of packet sw	vitching over circuit switching?	(8)			
	b.	Define the following:					
		(i) Thermal Noise.	(ii) Impulse Noise.	(4)			
	c.	Briefly explain fixed routing along with	· · · · · ·	(4)			
Q. 7			nhancements have been included in IPv6		(8)		
			MIME. What are the limitations in SM (8)				

Q.8

a. Define the following terms:

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Q.9

(i) Proxy (ii) Gateway (iii) Crosstalk (iv) HTTP **(8)** b. Briefly explain the various principles that guided the designing of the OSI layers.

a. Briefly explain ATM. Also compare ATM or Cell relay with frame relay.

(8)

(8)

b. Define ISDN and what are the principles of ISDN as defined by ITU-T. (8)