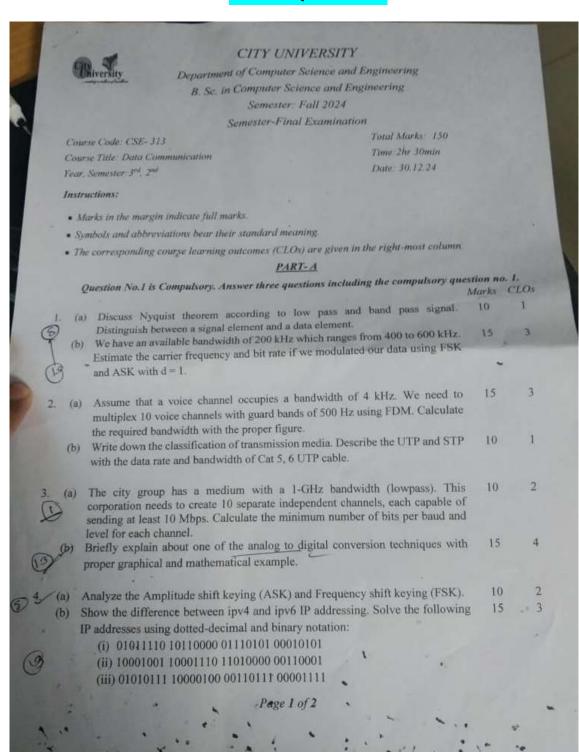
FINAL QUESTION



(vi) 192.17.10.15		
PART-B		
Question No.5 is Compulsory. Answer three questions including the compulsory question no. 5.		
 (a) Suppose you are a system administrator, and you are given an IP Address of 192.168.10.0, Subnet Mask 255.255.248. 	1.5	3
i) Find out the IP block size. ii) Find out the first three Subnet Addresses. iii) Find out the First Valid host. iv) Find out the Last Valid host. v) Find out the Broad Cast Address in each subnet.		
(2) (25) Differentiate between parallel and serial transmission in data communication.	10	2
6. (a) Elaborate on Analog-to-analog Modulation types S	10	9
(b) We must use synchronous TDM and combine 20 digital sources, each of 100	15	3
Kbps. Each output slot carries 1 bit from each digital source, but one extra bit is		
added to each frame for synchronization. Solve the following questions:		
i) Evaluate is the size of an output frame in bits		
ii) Find the output frame rate.		
iii) Compute the duration of an output frame.		
iv) Show the output data rate.		
 Estimate the system's efficiency (ratio of useful bits to the total bits). 		
(a) Distinguish between Asynchronous transmission and Synchronous transmission.	10	2
		-
(b) Construct the graph of the NRZ-I, AMI, and Manchester scheme using each of	15	3
the following data streams-		
i) 01010101		
ii) 0110101		
(a) A signal is carrying data in which two data elements are encoded as one signal	10	
element (r = 2). If the bit rate is 300 kbps, analyze the average value of the baud rate if c is between 0 and 1.		
(b) Discuss about the working procedure of optical fiber. Differentiate between step index and graded index in optical fiber transmission mode.	15	
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MidTerm Question

