

ISLAMIC UNIVERSITY OF TECHNOLOGY (IUT)
ORGANISATION OF ISLAMIC COOPERATION (OIC)
Department of Computer Science and Engineering (CSE)

ONLINE QUIZ #2

DURATION: 25 Minutes

FULL MARKS: 40

CSE 4405: Data and Telecommunications

1. Consider a bit stream: 0110001001. Draw corresponding digital signals for following line coding schemes and also comment on the bandwidth requirement of each of the schemes. 5*4

i. AMIii. Polar RZiii. Manchesteriv. MLT-3v. NRZ-I

2. State and explain the Nyquist Bit Rate formula. Suppose that the spectrum of a channel is between 3 MHz and 4 MHz and $SNR_{dB} = 24$ dB. Then what is the theoretical highest data rate of this channel? How many signaling levels are required to achieve this? 5+6

3. Write short notes on the followings: 3*3

i. Scramblingii. Bandwidth-Delay Productiii. Jitter