CSE-320

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See: 08
Assignment: 2



P3 = 80 W Q1 Ans: We know, eigd is Bandwidth = Joh Fother $(\frac{3}{19})_{01} = 40 - 5$ = 35 K Hz Griven amplitude for Zokhz is 30 v and it is peak amplitude STOCK TOOS ! = Ation bodge with sweet -) spol x nt wbman = stan atab. 36 35 25

. Ans. to gue not

: The attenuation in decibels

$$= 10.10910 \left(\frac{80}{100} \right)$$

$$= 12000 \times 10^{3} \times 10^{9} \times 10^{11} \times 2000)$$

$$= 131.59 \times 10^{6} \text{ by}$$

Q4) Ans: Given frame size1 = 6000000 band with = 10×106 Trans mission = frame size 6 X 106 10 × 106 = 0.6.500 Given, distance = 3000 x 103 X emspeed wave 2x119 & price sount propagation time = distance
speed 0115 X = 3000 X 103 2 x/0 8 = 0.015 sec He are, frame mission frame is GUN IN LAND COMPONENT. DIMORE OVER

CS CamScanner

Occ No Number 3 of routen = 55 : CHA (10 Dand mith = REIN hard · . Que ving time = (Num oy 1700 tens) X (Queuning time pen nouten) 901 X 9 = 901X01 = 5 X 5x10-6 = 0.6. 500 $= 2.5 \times 10^{-5} sel$ Oriver, diftance = Zooux lo3 ... Processing times = (Nom of rigotens X Pen nouten processing time 99 MATEIN boogi E 01 X 0 0 0 5. = 5x 2x10-6 80175 = 1 ×10-5 30C D. 019 900 Here, transmission time is the duminant component. 1 Morre over,

both processing time and avening time i are negligible as they are too small to measure. nate depends on three tactors. Q5/ Ansio Werknow bis board out ! Bandwidth = th - fl Finghals sie ver. => 20 = 60 - BL 1 = 40 HZ Lowest fraquent CAT Apple Attenum floor :. Spectrum SIG Noltoge Sut None (Megic LC Amplitude of the singual get hed while soing through transmins 60

Data Mate Li imit: It describes how fast we can send data in bits per second, over a channel. Data nate depends on three factors, il the hand width available A PRO iii The level of singuals we use. iil The quality of the channel.

Of singnal when the power or amplitude of the singnal get reduced while going through transmission channel

Distoration: This is the state when the singnal get deformed while transmitting through medium. For this Reason in put and output sing mil does

not match. Hene, Atte huntion makes the singual weak while in distontion, the sing nals wave po form get deformed: Q8] Ans: SNR = 10x 200,1×10-3 2×10-6 $= 1 \times 10^{6}$ · SNR dB = 10. log (SNR)

= 10 109 10 (1x106) 1ct +10 Flider pominito po 60 18 louisis out than a mitting through medium. For 29 Ans: A high SNR means the singnal is less commupted by hoise, a tow in low snr ment sing nat is more very connepted it by noise. This is why high GNR is more desimble than low SNR. (3) ANS: SNP SNEGE

Q 10] @ Ans:

Given,

① 67 Levels
$$\rightarrow log_2^{(67)} = \frac{6.6066}{6.066}$$

 \approx 7 (Ans 1)

(ii) 198 Levels
$$\rightarrow 192^{(198)} = 7.629$$

$$\approx 88$$
(Ans3)