

Total No. of Question : [4]

Registration No. :

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Programme Name : Bachelor of Electronics and Telecommunication Engineering
Regular S.Y.B.Tech. ESE (A.Y. 2023-24) Sem. III Nov.2023
III SEMESTER (2022 BATCH)
201ETL203-Analog and Digital Communication (TH)

Duration : [11:00 AM - 01:00 PM]

Date : 28 Nov, 2023

Day : Tuesday

Marks : 50

Instructions :

(Q1) All Questions are compulsory [20.0]

(1.1) A 500-watt carrier is modulated to a depth of 80 percent. Calculate the total power in the amplitude modulated wave. Also estimate the sideband powers. [6.0]

(1.2) Explain frequency Modulation with mathematical analysis and waveforms. [7.0]

(1.3) What is Shannon's theorem of information? Explain it with suitable example. [7.0]

(Q2) All Questions are compulsory [10.0]

(2.1) What are different sources of Noise. Explain each in detail [4.0]

OR [2.1 / 2.2]

(2.2) What is an SNR? Explain it with suitable examples [4.0]

(2.3) What is a quantization noise? Explain SQNR with suitable examples [6.0]

(Q3) All Questions are compulsory [10.0]

(3.1) What are line codes? Explain Unipolar and Bipolar line codes with examples [3.0]

(3.2) Write short notes on any two [7.0]

1. Correlation receiver

2. Eye diagram

3. Matched filters

OR [3.2 / 3.3]

(3.3) Write short notes on any two [7.0]

1. M- array Signaling

2. Eye diagram

3. Line codes--NRZ

(Q4) Attempt any two out of three questions [10.0]

(4.1) What is an PSK modulation? Explain its generation with block diagram and waveforms. [5.0]

(4.2) Differentiate different digital modulation techniques (ASK,FSK and PSK) [5.0]

(4.3) Draw and explain FSK modulation technique with block diagram [5.0]
