

No Preview
Available

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]
