



QP CODE: 24027330



Reg No :

Name :

**B.Sc DEGREE (CBCS) REGULAR / IMPROVEMENT / REAPPEARANCE
EXAMINATIONS, OCTOBER 2024**

Third Semester

Core Course - EL3CRT06 - ANALOG COMMUNICATION

Common to B.Sc Electronics and Computer Maintenance Model III & B.Sc Electronics Model III

2017 Admission Onwards

192FE4C9

Time: 3 Hours

Max. Marks : 80

Part A

*Answer any **ten** questions.*

*Each question carries **2** marks.*

1. Give formula for signal to noise ratio.
2. What do you mean by Pilot Carrier System?
3. Define Vestigial Side Band System.
4. Define the theory of frequency and phase modulation.
5. Give modulation index of FM.
6. Define Pre-Emphasis.
7. Define Direct Method for the generation of FM.
8. What is a demodulator?
9. What is a Balanced Slope Detector?
10. What are the disadvantages of TRF Receiver?
11. What is Tracking error in superheterodyne receiver?
12. What is a Local Oscillator?

(10×2=20)

Part B

*Answer any **six** questions.*

*Each question carries **5** marks.*





13. Draw a neat sketch of Amplitude Modulated wave and derive equation for modulation index.
14. A broadcast radio transmitter radiates 10 KW when modulation percentage is 60. How much of this is carrier power.
15. Derive equation for output voltage of Balanced Modulator.
16. Explain Independent Side band System.
17. Compare AM and FM.
18. Differentiate between Narrowband FM and Wide band FM.
19. Explain a Stabilized Reactance Modulator.
20. Explain a Phase Discriminator.
21. Explain AGC and draw simple AGC characteristics.

(6×5=30)

Part C

*Answer any **two** questions.*

*Each question carries **15** marks.*

22. With a neat sketch, explain any method of Single Side Band Technique.
23. What are the other forms of interferences that affect radio receivers other than noise. Explain in detail.
24. Explain the complete block diagram of the Armstrong frequency modulation system.
25. With the help of suitable diagram, Explain a Superheterodyne receiver.

(2×15=30)

