



C14-EC-304

4240

BOARD DIPLOMA EXAMINATION, (C-14)
SEPTEMBER/OCTOBER - 2020
DECE—THIRD SEMESTER EXAMINATION
ANALOGUE COMMUNICATION

Time : 3 hours]

[Total Marks : 80

PART—A

3×10=30

Instructions : (1) Answer **all** questions.
(2) Each question carries **three** marks.
(3) Answers should be brief and straight to the point and shall not exceed *five* simple sentences.

1. Define frequency modulation.
2. List different types of noise.
3. Define modulation index of FM signal.
4. Define pre-emphasis and de-emphasis.
5. Explain the need of AVC.
6. Distinguish between low-level and high-level modulation.
7. Define radiation resistance.

- * 8. State the need for folded dipole.
9. Define vertical and horizontal polarization.
10. Define decibel and neper.

PART—B

10×5=50

- Instructions :** (1) Answer *any five* questions.
 (2) Each question carries **ten** marks.
 (3) Answers should be comprehensive and the criterion for valuation is the content but not the length of the answer.

11. (a) Define the term 'distortion' and list the types of distortions. 5
 (b) What are the different types of internal and external noises? 5
12. (a) Derive the relation between total power and carrier power in AM. 6
 (b) List any four applications of SSB. 4
13. (a) Compare AM and FM. 6
 (b) Explain the need for DSB-SC and SSB modulation. 4
14. Draw the block diagram of high-level modulated transmitter and explain the function of each block.
15. (a) Draw the block diagram of FM receiver and explain each block. 7
 (b) Write the factors affecting the choice of IF. 3

- * **16.** (a) Explain the working of log-periodic antenna with radiation pattern. 6
- (b) Define the following terms related to antenna : 4
- (i) Directivity
- (ii) Beam width
- 17.** (a) Define resonant and non-resonant antenna. 6
- (b) List any four applications of dish antenna. 4
- 18.** Explain sky wave propagation.
