



C-09-EC-304

3236

BOARD DIPLOMA EXAMINATION, (C-09)

MARCH / APRIL - 2019

DECE - III SEMESTER EXAMINATION

COMMUNICATION ENGINEERING

Time : 3 Hours]

[Total Marks : 80

PART - A

3×10=30

- Instructions :**
- (1) Answer **ALL** questions.
 - (2) Each question carries **THREE** marks.
 - (3) Answer should be brief and straight to the point.

- 1 List the applications, of VHF band of frequency spectrum
- 2 Define. baseband, carrier and modulated signals
- 3 List the merits of AM over FM
- 4 Define Frequency Modulation
- 5 Define pre-emphasis in FM
- 6 Compare AM and FM receivers
- 7 List various frequency bands .used in radio receivers
- 8 Define Image frequency rejection ratio in radio receivers
- 9 List the types of transmission lines
- 10 Define critical frequency

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[Contd...

PART - B**10×5=50**

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

- 11 Explain different types of internal and external noise
- 12 Explain : (i) Amplitude distortion (ii) Frequency distortion
- 13 (a) State the expressions for power in carrier, side bands, total power and total current in an AM signal **5**
- (b) The antenna current of an AM transmitter is 8 Amperes **5**
when it is modulated by an audio sine wave with modulation index of 0.6. To what value will this current rise when it is simultaneously modulated by another audio sine wave with modulation index of 0.7 ?
- 14 (a) Describe the method of producing DSBSC **5**
- (b) List the advantages of DSBSC. **5**
- 15 Draw block diagram for Heterodyne AM Transmitter and briefly explain its operation
- 16 Draw block diagram of FM transmitter using armstrong method and explain its working
- 17 Explain ground wave propagation of EM waves
- 18 Describe : (i) Reflection, (ii) Refraction of EM waves