

TED(15) 3041  
(REVISION 2015)

Reg No.....  
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THIRD SEMESTER DIPLOMA EXAMINATION IN ELECTRONICS ENGINEERING – OCTOBER 2016

COMMUNICATION ENGINEERING

[Time: 3hrs]  
(Maximum marks: 100)

PART A

(Answer all questions in one or two sentences. Each question carries 2 marks)

I

1. List different types of wave propagation
2. Define smart antenna
3. State any 2 advantages of PCM.
4. Define signal to noise ratio.
5. What is delayed AGC?

(5x2=10)

PART B

(Answer any 5 questions. Each question carries 6 marks)

II

1. Explain Parabolic antenna with figure.
2. Compare AM and FM
3. What are different Digital Carrier Modulation Techniques
4. Describe AFC
5. State the different measures to improve signal to noise ratio
6. State the need of limiter in FM receiver
7. Draw the block Diagram of Superheterodyne Receiver.

(5x6=30)

PART C

( Answer one full question from each unit. Each question carries 15 marks)

## UNIT I

- III. a. Explain different types of Electro Magnetic waves. (9)
- b. With radiation pattern explain half wave dipole. (6)

OR

IV Write short notes on

- a. Skip Distance
- b. Maximum Usable frequency
- c. Virtual height (15)

## UNIT II

- V.a. Derive the expression for Modulation index for AM. (10)
- b. State sampling theorem and mention its significance. (5)

OR

- VI a. Illustrate collector modulation with a neat sketch. (8)
- b. Explain PAM and PWM (7)

## UNIT III

- VII a. Draw the block diagram of AM Transmitter and discuss the function of each block (10)
- b. List the different types of noise present in communication system? (5)

OR

- VIII Explain with a block diagram the indirect method of FM Generation (15)

## UNIT IV

- IX a. Explain AM Demodulation circuit using Diode detector (9)
- b. Define Selectivity Sensitivity and Fidelity of Radio Receivers (6)

OR

X a. Describe the operation of FM Receiver with block diagram (10)

b. What are the criteria for choosing IF in Super heterodyne Receiver (5)