TED (10) – 4045

(REVISION — 2010)

Reg. No. .....

Signature .....

DIPLOMA EXAMINATION IN ENGINEERING/TECHNOLOGY/ MANAGEMENT/COMMERCIAL PRACTICE — APRIL, 2018

COMMUNICATION ENGINEERING

[*Time* : 3 hours

(Maximum marks : 100)

PART — A

(Maximum marks : 10)

Marks

I Answer *all* questions in one or two sentences. Each question carries 2 marks.

1. What is Maximum Usable Frequency (MUF) ?
2. What is Diffraction ?
3. Define Frequency modulation.
4. Define sensitivity of radio receiver.
5. State the need for limiters in FM Receiver. (5×2 = 10)

PART — B

(Maximum marks : 30)

II Answer any *five* of the following questions. Each question carries 6 marks.

1. Write a note on diversity reception.
2. What are the characteristics of rhombic antennae ?
3. Distinguish between low level and high level modulation.
4. What is pre-emphasis and de-emphasis ?
5. What is principle of AFC ?
6. Distinguish between simple AGC and delayed AGC.
7. What is the function of a harmonic generator in AM transmitter ? (5×6 = 30)

Marks

PART — C

(Maximum marks : 60)

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

UNIT — I

III (a) What is sky wave propagation ? 3

(b) Explain the ionosphere and the characteristics of various layers. 12

OR

IV Write short notes on :

(a) Marconi Antenna

(b) Skip Distance

(c) Broadside antenna array 15

UNIT — II

V (a) Describe the frequency spectrum of AM with relevant figure and equations. 8

(b) Explain vestigial side band system. 7

OR

VI (a) Draw the waveforms of AM, FM and PM wave. 6

(b) Compare narrow band and wide band FM. 9

UNIT — III

VII (a) Draw the block diagram of an AM transmitter. 7

(b) Discuss about noise in communication system. 8

OR

VIII With the help of necessary figure explain method for FM generation. 15

UNIT — IV

IX Explain a super heterodyne receiver with the help of a block diagram. 15

OR

X (a) What are the characteristics of a radio receiver ? 6

(b) State the reasons affecting choice of IF in radio receivers. 9
