TED (15) – 3041

(REVISION — 2015)

Reg. No. ....

Signature ....

DIPLOMA EXAMINATION IN ENGINEERING/TECHNOLOGY/ MANAGEMENT/COMMERCIAL PRACTICE — OCTOBER, 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. Explain phase modulation.

2. Define Skip Distance.

3. Explain Critical Frequency.

4. Define signal - to - noise ratio.

5. Define Selectivity. $(5 \times 2 = 10)$

PART — B

(Maximum marks : 30)

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

1. Explain Space wave propagation.

2. Explain Pulse amplitude modulation.

3. Describe simple AGC with circuit diagram.

4. Explain the need of Limiter circuit in FM.

5. Describe the Need for modulation.

6. Explain Refraction and Diffraction.

7. Explain AFC with block diagram. $(5 \times 6 = 30)$

[34]

[P.T.O.

Marks

PART — C

(Maximum marks : 60)

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

UNIT — I

III	(a)	Explain Ground wave propagation.	8
	(b)	Explain the working of parabolic Antenna.	7

OR

IV	(a)	Draw different layers of ionosphere and explain it.	9
	(b)	Explain Folded dipole antenna.	6

UNIT — II

V	(a)	Derive the expression for modulating index in AM.	6
	(b)	Explain the working of balanced modulator with circuit.	9

OR

VI	(a)	Derive the expression for an AM wave.	7
	(b)	Explain pulse code modulation Technique.	8

UNIT — III

VII	(a)	Draw the block diagram of Direct FM transmitter and explain the function of each block.	9
	(b)	Explain De-emphasis and Pre-emphasis with necessary diagrams.	6

OR

VIII	(a)	Explain the working of AM transmitter with block diagram.	9
	(b)	Explain types of internal noise.	6

UNIT — IV

IX	(a)	Explain the factors influencing the Choice of IF.	6
	(b)	Explain the working of Super heterodyne receiver with block diagram.	9

OR

X	(a)	Explain the working of diode detector with circuit diagram.	6
	(b)	Explain FM receiver with Block diagram.	9