

TED (15) – 6241

(REVISION – 2015)

Reg. No.

Signature

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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. Define electric field.
2. List two noises in a communication system.
3. Define sampling theorem.
4. State the need of limiter in FM receiver.
5. List the layers of ionosphere.

(5×2 = 10)

PART — B

(Maximum marks : 30)

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

1. Define SSBSC, DSBSC, VSC.
2. Compare AM and FM receivers.
3. Explain the operation of FM Radio receiver.
4. Write any four different types of EM waves.
5. Describe pre-emphasis and de-emphasis.
6. Draw the balanced modulator circuit.
7. Write short notes on MANETS.

(5×6 = 30)

PART — C

(Maximum marks : 60)

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

UNIT — I

- III (a) Describe parabolic antenna.
(b) Explain groundwave propagation.

OR

- IV (a) Explain folded dipole antenna.
(b) Write short notes on :
(i) Skip distance (ii) MUF
(iii) Critical frequency (iv) Virtual height

UNIT — II

- V (a) Explain AM collector modulator circuit.
(b) Explain companding.

OR

- VI (a) Explain pulse code modulation system.
(b) Write about quantization.

UNIT — III

- VII (a) Draw and explain the block diagram of FM transmitter.
(b) List five specifications of FM transmitter.

OR

- VIII (a) Explain AM transmitter with block diagram.
(b) Explain AFC system with block diagram.

UNIT — IV

- IX (a) Draw and explain superheterodyne receiver with block diagram.
(b) Explain three characteristics of radio receiver.

OR

- X (a) Explain simple AGC and delayed AGC.
(b) Explain AM demodulator using diode detector.
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