TED (10) – 4050

(REVISION — 2010)

Reg. No. ....

Signature ....

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

MODERN COMMUNICATION SYSTEMS

[*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 PWM.
2. What is a circular wave guide ?
3. What is downlink frequency ?
4. Define frequency reuse.
5. List the application of fiber optics in data communication. (5×2 = 10)

PART — B

(Maximum marks : 30)

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

1. Explain PCM transmitter with the help of block diagram.
2. Describe the structure of a Gunn diode using diagram.
3. Describe the applications of the satellite.
4. Explain acceptance angle with the help of a diagram.
5. Explain step index and graded index fibers using schematic diagrams.
6. Explain DECT ?
7. Describe the power control methods. (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) Explain the block diagram of a digital communication system. 8

(b) Explain the BFSK signal using waveform. 7

OR

IV (a) Draw the block diagram for BFSK generation and explain. 8

(b) Draw the block diagram of MSK transmitter and explain. 7

UNIT — II

V (a) Draw the block diagram of a microwave repeater and explain. 8

(b) Explain TDMA in satellite communication. 7

OR

VI (a) Draw the schematic diagram of the TWT and explain it. 8

(b) Describe dish antenna using a schematic diagram. 7

UNIT — III

VII (a) Explain the three classification of optical fiber under mode of operation. 8

(b) Explain the basic LASER action using diagrams. 7

OR

VIII (a) Explain the advantages of fiber optic communication system. 8

(b) Explain the working of avalanche photodiode with circuit diagram. 7

UNIT — IV

IX (a) Describe the operation of a cellular system. 8

(b) Explain the GSM architecture. 7

OR

X (a) Explain channel fading. 8

(b) Explain mobile IP, WAP and WML. 7