



TED (15) - 6042

Reg. No.....

(REVISION - 2015)

Signature

DIPLOMA EXAMINATION IN ENGINEERING/TECHNOLOGY/
MANAGEMENT/COMMERCIAL PRACTICE — OCTOBER, 2019

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. List any four applications of microwave.
2. Describe velocity modulation.
3. Distinguish between uplink and downlink frequency.
4. Name any two optical sources and optical detectors.
5. Define the term frequency reuse.

(5×2 = 10)

PART — B

(Maximum marks : 30)

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

1. Explain the working of tunnel diode and draw the V-I characteristics.
2. Draw the block diagram of satellite communication system.
3. Distinguish between Geo stationary & Geo synchronous satellite.
4. With suitable diagrams explain about fibre optic communication systems.
5. Elaborate on the working principle of LED.
6. Discuss about different Hand-off strategies in mobile communication.
7. Compare GSM and CDMA.

(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) With neat diagram explain the working of Reflex Klystron. 9
 (b) Identify any four characteristics of microwaves. 6

OR

- IV (a) With neat sketch explain working of TWT. 9
 (b) Briefly elaborate the functions of waveguides. 6

UNIT — II

- V (a) With help of block diagram explain Earth station. 9
 (b) List any four application of satellite communication. 6

OR

- VI (a) Explain DTH. 6
 (b) Compare CDMA, TDMA & FDMA. 9

UNIT — III

- VII (a) Briefly explain about the principle of LASER with neat diagrams. 9
 (b) Write any four advantages of fibre optic communication systems. 6

OR

- VIII (a) Explain the working of PIN diode. 7
 (b) Compare single mode & multimode fibers. 8

UNIT — IV

- IX (a) Explain CDMA technology. 9
 (b) Compare 3G & 4G mobile technologies. 6

OR

- X Write notes on
 (a) Wi-Fi and list any two advantages & disadvantages. 8
 (b) Bluetooth. 7