TED (15) 6042

(Revision-2015)

A22-03124

Reg.No...........................

Signature........................

DIPLOMA EXAMINATION IN ENGINEERING/TECHNOLOGY/MANAGEMENT/ COMMERCIAL PRACTICE, APRIL-2022

COMMUNICATION SYSTEM

[Maximum marks: 100]   (Time: 3 Hours)

PART – A
Maximum marks : 10

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

1. List any two types of horn antenna.
2. Define GIS.
3. List any 4 advantages of fiber optic communication.
4. Define the term hand off in mobile communication.
5. List optical detectors used in optical communication.   (5 x 2 = 10)

PART – B
Maximum marks : 30

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

1. List any six characteristics of microwave devices.
2. With the help of suitable diagram, explain the working of reflex klystron.
3. Write a short note on geostationary satellites.
4. Describe the DTH satellite television.
5. Describe fiber optic cable structure.
6. Define the term channel fading.
7. List the features of WiMax.   (5 x 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 diagram explain the working of TWT.   (8)

     (b) Describe tunnel diode   (7)

<div align="center">OR</div>

IV.(a) With a block diagram explain about microwave transmitter. (8)

  (b) List any 7 characteristics of waveguide. (7)

<div align="center">

UNIT-II

</div>

V. (a) Draw and explain the block diagram of earth station. (8)

  (b) List the application of satellite communication. (7)

<div align="center">OR</div>

VI. (a) Compare FDMA and CDMA. (8)

  (b) List any 7 advantages of TDMA. (7)

<div align="center">

UNIT-III

</div>

VII. (a) Draw and explain the block diagram of fiber optic communication system. (8)

  (b) Compare single mode and multimode fiber. (7)

<div align="center">OR</div>

VIII.(a) Explain the working of PIN photodiode used in optical communication. (8)

  (b) List and explain various cable losses. (7)

<div align="center">

UNIT-IV

</div>

IX. (a) Explain the GSM network architecture. (8)

  (b) List the advantages and disadvantages of 3G. (7)

<div align="center">OR</div>

X. (a) Draw and explain the cellular concept of mobile communication. (8)

  (b) List the advantages of Bluetooth. (7)

<div align="center">************************</div>