



TED (10) – 5053

Reg No

(REVISION — 2010)

Signature

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

OPTICAL COMMUNICATION

[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 total internal reflection.
2. What is photo detection ?
3. Define Skew Rays.
4. Define Optical isolator.
5. What is Optical Burst Switching ?

(5×2 = 10)

PART — B

(Maximum marks : 30)

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

1. Describe the basic structure of optical fiber.
2. Explain Numerical Aperture.
3. What are the advantages of Optical fiber ?
4. What you mean by Optical Amplifiers ?
5. Draw and explain Pin photodiode.
6. Explain fiber couplers.
7. Give a brief description about beam splitters.

(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) Write short notes on Glass optical fibers, Halide Glass Optical. 6
(b) Explain the modes of optical fiber. 9

OR

- IV Describe the losses in optical fibers. 15

UNIT — II

- V (a) Draw and explain Raman optical amplifiers. 8
(b) With neat sketch explain the structure of Avalanche Photo diode. 7

OR

- VI (a) Explain the working of Edge Emitting LED. 7
(b) Explain the two types of laser diodes. 8

UNIT — III

- VII (a) Explain the working of Optical circulator. 6
(b) Explain Optical transmitter with block diagram. 9

OR

- VIII Draw and explain optical fiber connectors. 15

UNIT — IV

- IX Illustrate different types of network topologies. 15

OR

- X (a) Describe the basic public telecommunications network. 5
(b) Explain SONET/SDH rings. 10
