

TED (15) – 2003
(REVISION — 2015)

Reg. No.
Signature

DIPLOMA EXAMINATION IN ENGINEERING/TECHNOLOGY/
MANAGEMENT/COMMERCIAL PRACTICE — OCTOBER, 2017

ENGINEERING PHYSICS - II

[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. Write down the SI units for angular velocity and angular acceleration.
2. What is meant by escape velocity ?
3. State Ohm's law.
4. What is monochromatic radiation ?
5. What is nuclear fusion ?

(5 × 2 = 10)

PART — B

(Maximum marks : 30)

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

1. Derive the expression for moment of inertia of a circular disk about
(a) a diameter (b) a tangent.
2. Derive the expression for the centripetal acceleration of a body in uniform circular motion.
3. Using Newton's theory of gravity, derive the expression for the period of an artificial satellite.
4. Discuss the variation of acceleration due to gravity with altitude, latitude and depth.
5. With the help of a neat diagram explain the theory and working of a moving coil galvanometer.
6. State Kirchhoff's laws and use these to derive the condition for balancing of a Wheatstone's bridge.
7. Explain the principles and working of a typical nuclear power reactor. (5 × 6 = 30)