

TED (15) – 2003

Reg. No.....

(REVISION — 2015)

Signature .....

SECOND SEMESTER DIPLOMA EXAMINATION IN ENGINEERING/  
TECHNOLOGY — OCTOBER, 2016

**ENGINEERING PHYSICS - II**

(Common to all branches except DCP and CABM)

[Time : 3 hours

(Maximum marks : 100)

PART — A

(Maximum marks : 10)

Marks

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

1. Write down the SI units for moment of inertia and torque.
2. What is meant by gravitational potential ?
3. State Kirchhoff's laws ?
4. What is photoelectric work function ?
5. Distinguish between nuclear fission and fusion ?

(5×2 = 10)

PART — B

(Maximum marks : 30)

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

- II
1. Derive the expression for moment of inertia of a circular disk about its own axis.
  2. Explain the concepts of centripetal force and derive the expression for it in the case of a body in uniform circular motion.
  3. Explain what is meant by geostationary satellite and polar satellites. Discuss their uses.
  4. Discuss the variation of acceleration due to gravity with altitude and depth.
  5. Explain the terms electrical resistance, resistivity and conductivity.
  6. Derive the condition for balancing of a Wheatstone's bridge.
  7. Explain the principles and working of solid state lasers and its advantages.

(5×6 = 30)