4003

C14-A-AA-AEI-BM-C-CM-CH-CHPC-
CHPP-CHOT-CHST-EC-EE-IT-M-MET-
MNG-PET-TT-RAC-PCT–**103**

4003

BOARD DIPLOMA EXAMINATION, (C-14)

MARCH/APRIL—2021

FIRST YEAR (COMMON) EXAMINATION

PHYSICS

Time : 3 hours] [*Total Marks* : 80

PART—A

4×5=20

Instructions : (1) Answer *any* **five** questions.

(2) Each question carries **four** marks.

(3) Answers should be brief and straight to the point and shall not exceed five simple sentences.

1. What are the advantages of SI?

2. Define triangle and polygon law of vectors.

3. Define acceleration due to gravity and write the equation of motion under gravity.

4. State the laws of simple pendulum.

5. State first and second laws of thermodynamics.

6. What is an echo? Write the methods of minimising echo's.

7. Define capillarity. Write its uses in daily life.

8. State Hooke's law. Write the units of stress and strain.

9. Write the properties of magnetic lines of force.

10. State the laws of photoelectric effect.

PART—B

15×4=60

Instructions : (1) Answer *any* **four** questions.

(2) Each question carries **fifteen** marks.

(3) Answers should be comprehensive and criterion for valuation is the content but not the length of the answer.

11. Define scalar quantity and write the properties of scalar product.

12. Show that the path of a projectile in oblique projection is a parabola.

13. What is friction? Write its different types. State the laws of static friction.

14. Define kinetic energy. Show that K.E = ½ mv^2.

15. Define simple pendulum. Derive the expression for time period of simple pendulum.

16. Distinguish between isothermal and adiabatic process.

17. What is noise pollution? Explain the sources, effects and methods to minimise noise pollution.

18. State and explain Kirchhoff's laws in electricity.

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