D 133521 **(Pages : 2)** **Name.....**

Reg. No.....

FIRST SEMESTER (CUFYUGP) DEGREE EXAMINATION
NOVEMBER 2025

Applied Physics/Physics

APH1FM105/PHY1FM105—PHYSICS IN DAILY LIFE

(2024 Admission onwards)

Time : One Hour and a Half Maximum : 50 Marks

Section A

Answer **all** *questions.*
Each question carries 2 *marks.*
Ceiling 16 *marks.*

1. What is the principle behind the heating process of a microwave oven ?
2. Explain how the fresh air fan functions in a kitchen.
3. What role does copper play in kitchen utensils ?
4. Describe how noise is produced by a dishwasher.
5. What is the principle behind a weighing scale ?
6. Explain why metal objects can feel colder than plastic ones.
7. What are the physics behind spin bowling in cricket ?
8. Why is airflow separation important in football physics ?
9. Explain the importance of boundary layer effects in football.
10. How does the hot spot technology work in cricket ?

Section B

Answer **all** *questions.*
Each question carries 6 *marks.*
Ceiling 24 *marks.*

11. Discuss how an induction cooktop utilizes electromagnetic fields to heat cookware.
12. Explain the physics behind the goalkeeper's throw in football.

Turn over

13. Compare the working principles of Hawkeye and Snicko technologies in cricket.

14. Describe how turbulence affects the trajectory of a football during a game.

15. What are the common methods to reduce energy waste in the kitchen ?

Section C

Answer any **one** *question.*
The question carries 10 *marks.*

16. Discuss in detail the physics of pace bowling in cricket, including seam, air resistance, and swing.

17. Explain the principles of a banana kick in football, including the role of the Bernoulli effect and Magnus effect.

(1 × 10 = 10 marks)