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Name.....

Reg. No.....

**FIRST SEMESTER (CUFYUGP) DEGREE EXAMINATION
NOVEMBER 2024**

Applied Physics/Physics

APH 1FM 105/PHY 1FM 105—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. Explain how energy is wasted in a typical kitchen.
2. What is the purpose of using stainless steel in kitchen utensils ?
3. How does a refrigerator maintain low temperatures ?
4. Describe the critical speed in football aerodynamics.
5. What happens during the turbulent wake phase of a football's flight ?
6. Why do objects at lower temperatures become more brittle ?
7. Explain the significance of choosing willow wood for cricket bats.
8. What is the function of a snickometer in cricket ?
9. How does a modern photocopier (Xerox machine) work ?
10. Explain why plastic utensils are sometimes preferred over metal ones in the kitchen.

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

11. Describe the physics behind the Magnus effect and its importance in sports.
12. How does the Bernoulli effect influence the motion of a football during a game ?

Turn over

13. Explain the working of hot spot technology in cricket.
14. How do pendulum clocks maintain accurate time based on harmonic oscillations ?
15. Discuss the physics of modern kitchen appliances and their impact on energy efficiency.

Section C

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

16. Explain the differences between spin bowling during different times of the day, focusing on the reasons for greater spin later in the day.
17. Discuss the physics behind sound in air and how it relates to noise in the kitchen.

(1 × 10 = 10 marks)