(FOR THE CANDIDATES ADMITTED DURING THE ACADEMIC YEAR 2025-26 ONLY) **(NO. OF PAGES: 1)**

SUBJECT CODE 25 UPS F01

REG.NO:

NGM COLLEGE (AUTONOMOUS) POLLACHI

END-OF-SEMESTER EXAMINATIONS: NOVEMBER – 2025

B.Sc.-PHYSICS **MAXIMUM MARKS: 50**

I SEMESTER **TIME: 2 HOURS**

PART-IV : FOUNDATION COURSE

INTRODUCTORY PHYSICS

SECTION-A (10 X1 =10 MARKS)

ANSWER THE FOLLOWING QUESTIONS.
MULTIPLE CHOICE QUESTIONS. **(K1)**

1. What is the difference between the vectors $\vec{a}$ =9$\vec{\imath}$ -6$\vec{\jmath}$ and $\vec{b}$=5$\vec{\imath}$ + 4$\vec{\jmath}$? (K1)

   a) 4$\vec{\imath}$ +$\vec{\jmath}$ b) 4$\vec{\imath}$ –2 $\vec{\jmath}$ c) -4$\vec{\imath}$ + $\overrightarrow{2\,\jmath}$ d) $\vec{\imath}$+ $\overrightarrow{2\jmath}$

2. Which of the following kinetic friction is smaller? (K1)

   a) Limiting friction b) Static friction c) Rolling friction d) Sliding friction

3. The motion of rocket is based on the principle of conservation of ____ (K1)

   a) linear momentum b) angular momentum c) mass d) energy

4. The path traced by a projectile in space is called as ____ (K1)

   a) coral b) track c) trajectory d) orbit

5. Surface tension of a liquid is due to ___ (K1)

   a) Gravitational force b) adhesive force c) cohesive force d) nuclear force

SHORT ANSWER QUESTIONS.

6. Write the dimensional formula for acceleration. (K2)
7. Distinguish between centripetal and centrifugal forces. (Any one) (K2)
8. Write any two real life examples of alternate energy sources. (K2)
9. Write the examples of streamline and turbulent motion. (K2)
10. Define viscosity. (K2)

SECTION – B (5 X 8 = 40 MARKS)

ANSWER ANY FIVE.

11. Explain different types of vectors in detail.–
    i) addition, ii) subtraction, iii) resolution and iv) resultant vectors. (K3)
12. Discuss the electromagnetic and nuclear forces in detail. (K3)
13. State and prove the law of conservation of momentum. (K3)
14. Discuss any five types of motion in detail. (K3)
15. Describe in detail. i) free, forced and damped oscillations and
    ii) Comparison of light and sound waves. (K3)
16. Explain the process of banking of curved roads with a neat diagram. (K3)
17. Describe lubricants, capillary flow and diffusion in detail. (K3)
18. Write about the types of materials in daily use – conductors and insulators. (K3)

♣♣♣