aglasem.com

FOR TS CLASS 11 PREPARATION

TS Inter 1st Year Model Paper 2027 Physics

EXAM	YEAR	TYPE	SUBJECT
TS Class 11	2027	Sample Paper	Physics

Board of Intermediate Education - Telangana

Intermediate First Year

PHYSICS

Model Question Paper from 2026-27

Time : 3 Hours **Max. Marks : 60**

SECTION - A

Answer ALL questions

Each carriers TWO marks **10 × 2 = 20 Marks**

1. What is Chandrashekar limit?
2. What is meant by the term "order of magnitude". Given an example.
3. Differentiate distance from displacement.
4. What happens to the duration of a day when polar ice caps melt and flow towards the equator?
5. State Hook's law of elasticity.
6. What is hydrostatic paradox?
7. Distinguish between heat and temperature.
8. If the maximum intensity of radiation for a black body is found at 2.65 micrometer what is the temperature of the radiating body (Wein's constant 2.910^{-3}mk).
9. State zeroth law of Thermodynamics.
10. What is graphene, and what makes it a "Super material"?

SECTION - B

Answer any SIX questions

Each carriers FOUR marks **6 × 4 = 24 Marks**

11. A car moving at 72 kmph is brought to rest in 10 seconds. Find the distance it covers before stopping?
12. Show that the path followed by a projectile is parabola?

13. State Newton's second law of motion. Hence derive the equation F = ma from it.
14. Distinguish between centre of mass and centre of gravity.
15. What is a polar satellite? State its uses.
16. Explain the concept of elastic potential energy in a stretched wire and hence obtain an expression for it.
17. What is Reynold's number? Write its significance.
18. Four molecules of a gas have speed of 1, 2, 3 and 4 km/s. Find rms speed of the gas molecule.

SECTION - C

Answer any two of the following.

Each question carriers Eight marks **$2 \times 8 = 16$ Marks**

19. Define the coefficient of restitution and obtain the expression for it. A body freely falling from a certain height 'h', after striking a smooth floor rebounds to a height h/2. What is the coefficient of restitution between the floor and the body?
20. Derive the equation for kinetic energy and potential energy of simple harmonic oscillator and show that the total energy of a particle in SHM is constant at any point on its path.
21. Derive the relation between C_p and C_v on the basis of First law of thermodynamics. Determine the efficiency of a carnot engine which is operating between 127°C and 327°C.