

PHYSICS Class 9th SSC-9th-Swat-2026 Time: 20 Minutes Marks: 12 Multiple Choice Questions 01 Mark for each	Paper Code ① ● ②	Roll No. of the Student Serial No. Of the Answer Book _____
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SECTION-A

Note:

- 1) Attempting all MCQs is compulsory. This paper along with the OMR sheet must be returned to the superintendent after due time.
- 2) Fill the circle (A) (B) (C) (D), which one is correct with blue or black ball point in separate OMR Sheet like ●
- 3) If more than one circle in the OMR sheet is filled then no credit will be given to such answer.

- I.i The ratio of the gravitational forces exerted by two bodies of masses 10kg and 100kg on each other is:
 (A) 1:10 (B) 10:1 (C) 1:1 (D) 1:100
- ii. A child pushes a toy car with a force of 10N at an angle of 45° and displaces it by 6m by the child is. The work done by the child is:
 (A) 10J (B) 30J (C) 42J (D) 60J
- iii. Two bodies A and B do the same amount of work in times t_A and t_B respectively such that $t_A > t_B$. The power of A is:
 (A) Same as B (B) Less than B (C) More than B (D) Twice as that of B
- iv. The fractional change in length of a material due to applied stress is called:
 (A) Young modulus (B) Elastic limit (C) Elasticity (D) Strain
- v. Every thermometer depends on some property of material that varies with changes in temperature which is called:
 (A) Heat (B) Thermometric property (C) Internal energy (D) Specific heat
- vi. If temperature difference between the two ends of metallic rod is doubled and its length is also doubled rate of heat flow through it will be:
 (A) Doubled (B) Halved (C) Constant (D) Quadrupled
- vii. The number 0.00123 can be written in scientific notation as:
 (A) 1.23×10^3 (B) 12.3×10^3 (C) 1.23×10^{-2} (D) 1.23×10^{-3}
- viii. If a body is moving with uniform velocity, the slope of its speed-time graph is:
 (A) Zero (B) Constant (C) Increasing (D) Decreasing
- ix. A net force of 200N acts on a body of mass 10 kg for 3s. The Change in its momentum will be:
 (A) 20Ns (B) 40Ns (C) 100Ns (D) 600Ns
- x. The acceleration produced by a net force in a body depends on:
 (A) Mass of body only (B) Magnitude of net force only (C) Both mass and magnitude of net force (D) Neither mass magnitude force
- xi. A paratrooper falling downward with constant linear velocity is in.
 (A) Static equilibrium (B) Dynamic translational equilibrium (C) Dynamic rotational equilibrium (D) Free fall
- xii. If the applied force on a body is doubled and moment arm is also doubled, the torque produced in the body
 (A) Doubled (B) Halved (C) Unchanged (D) Quadrupled

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PHYSICS Class 9th

SSC-9th-Swat-2026

Note: Time allowed for section B and C is 2 hours and 40 minutes.

SECTION "B"

Marks: 32

1. Attempt any EIGHT Parts out of the following. Each Part carries equal marks.

1. Express the following measurements in scientific notation:
a. 1500m b. 0.0345kg c. 3600 mega watt d. 3210000N
2. Identify the type of motion in the following situations.
a. Motion of swing b. Motion of gas molecule
c. A free falling stone d. Motion of the hands of clock
3. A baseball, initially at rest, is struck with a bat and gains a momentum of 8Ns. If the time of impact is 1ms, what is the average force exerted on the baseball?
4. Define momentum, inertia, friction and centripetal force.
5. A uniform bar of 1m length is balanced at the center by hanging two weights X and Y at 20cm and 25cm respectively from the center. If the magnitude of weight Y is 4N, find the magnitude of the weight X.
6. Differentiate between static and dynamic equilibrium with examples.
7. If the distance between two identical spherical bodies is doubled and their masses are halved. By what factor will the gravitational force F between them change?
8. Prove that the gravitational potential energy of a body of mass m at a height h from a certain reference level is given by $E_p = mgh$, where g is acceleration due to gravity.
9. Define power and its SI unit watt. Convert power of 3×10^4 watt to horse power (hp).
10. State Hook's law. Express it in mathematical form. Explain the physical meaning of the term elastic limit of material.
11. What is convection of heat? Describe the mechanism of convection to heat water.

SECTION "C"

Marks: 21

Note: Attempt any THREE questions of the following. Each question carries equal Marks.

12. (a) Assuming uniform acceleration, derive the equation of motion $2as = V_f^2 - V_i^2$ using graphical analysis of motion. 4
(b) Plot the distance-time graph for the following situations. 3
 a. A body moving with uniform speed
 b. A body having zero speed
 c. A body moving with increasing speed
13. (a) Explain that the value of acceleration due to gravity (g) decreases as we move away from the surface of earth. 4
(b) Calculate the value of acceleration due to gravity (g) at a height of 600km above earth surface. (Given that $m_e = 6 \times 10^{24} \text{ kg}$, $r_e = 6.4 \times 10^6 \text{ m}$.) 3
14. (a) State Archimedes principle and derive a relationship between weight, density of a submerged object, buoyant force and density of fluid ($W/F_B = \rho_f / \rho_B$). 4
(b) Calculate the pressure exerted by water at a depth of 200m below the surface of water. (density of water = 1000 kg/m^3) 3
15. (a) Define heat capacity, specific heat capacity, specific latent heat of fusion and specific latent heat of vaporization. 4
(b) Describe three factors affecting the rate of evaporation. 3