

Roll Number	PR IX(01)15	Superintendent
In Figures:-	PHYSICS (New)	Signature/Stamp:
In Words:-	(Fresh/Reappear)	

(For Board's Office use only)

For English Medium Students
PHYSICS (New)
 9th (Fresh/Reappear)

Fic. No. _____
(For Board's Office use only)

Time Allowed: 2 Hours Marks: 65

Note:- There are THREE section in this paper i.e Section A,B, and C.

Attempt Section-A on the same paper and return it to the Superintendent within the given time.

No marks will be awarded for Cutting, Erasing, Overwriting. Marks of Identification will lead to UFM case, Mobile Phoe etc are not allowed in the examination hall.

Section-A
 Time Allowed: 15 Minutes SECTION-A Marks:- 12

Q-1. Write the correct option i.e. A, B, C or D in the empty box provided opposite to each part.

i. Which one is the best heat conductor?
 (A) Copper (B) Wood (C) Plastic (D) None A

ii. The relation between coefficient of linear and volume expansion is _____.
 (A) $y = 2a$ (B) $y = 3a$ (C) $y = 4a$ (D) None A

iii. Anti clock wise torque is taken _____.
 (A) Negative (B) Positive (C) Parallel (D) Zero B

iv. The unit of stress is _____
 (A) Nm (B) Nm^2 (C) Nm^{-2} (D) J A

v. 32°F is equal to _____.
 (A) 0°C (B) 32°C (C) 100°C (D) 305°C B

vi. A girl just support a mass 33kg suspended from a rope. What is the resultant force acting on the mass?
 (A) 440N (B) 0N (C) 20N (D) 200 N A

vii. The prefix micro means a factor of _____.
 (A) 10^{-3} (B) 10^{-9} (C) 10^{-6} (D) 10^{+6} C

viii. A machines is able to lift 200kg of bricks vertically up to a height of 30m above the ground in 50 S. What is the power of the machine? (Take $g = 10 \text{ ms}^{-2}$)
 (A) 1200W (B) 60000W (C) 3000W (D) 600W B

ix. Barometer is used to measure _____.
 (A) Density (B) Vacuum (C) Normal (D) Atmospheric pressure B

x. The centripetal acceleration = _____.
 (A) v^2/r (B) v^2r (C) v/r^2 (D) $v \times r^2$ C

xi. The length of the ectual path followed by a body durig its motion is called _____.
 (A) Position (B) displacement (C) Distance (D) A & B B

xii. The value of gravitational constant "G" in SI unit is _____.
 (A) $6.67 \times 10^{-11} \text{ N Kg}^2 \text{ ms}^{-2}$ (B) 9.8 (C) 8. (D) None A

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Note:- Time allowed for Section-B and Section-C is 2 Hours and 45 Minutes.

SECTION-B Marks: 32

Q-II Answerany EIGHT parts. Each part carries equal marks.

- Distinguish between base and derived physical quantities?
- Define vector and scalar quantities.
- What is centripetal force? Give three examples of a motion in a circle.
- How you would determine the centre of gravity of irregular shape body?
- State and explain the Newton's Law of Universal Gravitation.
- A bullet of mass 30 g travels at a speed of 15000 meter per second. Calculate its Kinetic Energy.
- State and explain Pascal's Principle.
- What is the difference between force of gravity and force of gravitation?
- Why does land cool at a slower or faster rate than sea water? Explain briefly.
- How much energy is generated when 1g of mass is completely converted into energy?

11. How heat losses are reduced in a thermos flask?

SECTION-C Marks: 21

Note:- Attempt any two questions. All questions carry equal marks.

Q-III (a) Define friction. Also describe advantages and disadvantages of friction.

(b) A truck moving at a speed of 20 ms^{-1} begins to slow at constant rate of 3 ms^{-2} , find how far it goes before stopping.

Q-IV (a) Explain the rectangular components of a vector, with the help of example.

(b) The mass of earth is $6 \times 10^{24} \text{ kg}$. Using newton's Law of universal Gravitation, Find the radius of Earth.

Q-VI (a) Explain radiation of heat. Describe any three of its applications.

(b) How much heat is required to increase the temperature of 0.5kg of water from 10°C to 65°C ?