Paper Code: _____

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| 1 | 1 |
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ESKP-09xvII01

PHYSICS - 9TH

Time: 3 hours

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Marks: 65

**Note: There are THREE sections in this paper i.e. A, B & C. Attempt Section-A and return it to the Superintendent within the given time. No marks will be awarded for cutting, erasing and overwriting.**

**Time: 15 mints** **Section-A** **Marks: 12**

QNo.1 Select the correct option and insert (A,B,C,D) in the relevant box.

i. The prefix micro means a factor of _____. C

A- $10^{6}$ B- $10^{-3}$ C- $10^{-6}$ D- $10^{-9}$

ii. The rate of change of velocity is called _____. D

A- Speed B- Distance C- Displacement D- Acceleration

iii. _____ produces severe burns. D

A- Hot air B- Sun rays C- Boiling water D- Steam

iv. Kg. $m.s^{-1}$ = _____. C

A- Ns B- $Ns^{-1}$ C- N D- Nm

v. Thermal conductivity is express in unit _____. _____

A- $Km^{-1}S^{-1}$ B- Wkm C- $Wkm^{-1}$ D- $Wk^{-1}m^{-1}$

vi. The average speed of bus is 15 m/sec. how far it can travel in 10 sec? B

A- 100m B- 150m C- 200m D- 250m

vii. The equivalent to Mega is _____. B

A- $10^{3}$ B- $10^{6}$ C- $10^{9}$ D- $10^{12}$

viii. Centripetal acceleration is given by $a_c$ = _____. A

A- $mv^2/r$ B- $mv/r$ C- $v^2/r$ D- $r/v^2$

ix. First condition of equilibrium _____. D

A- $\sum \vec{v} = 0$ B- $\sum \vec{p} = 0$ C- $\sum \vec{r} = 0$ D- $\sum \vec{F} = 0$

x. The value of "g" at the centre of earth is _____. A

A- Zero B- Constant C- Variable D- Maximum

xi. A 1kg mass has a KE = 1 joule. Its speed will be _____. _____

A- 0.45 m/sec B- 1 m/sec C- 1.4 m/sec D- 4.4 m/sec

xii. The unit for pressure used in weather maps is _____. C

A- Pascal B- Kilo Pascal C- Millibar D- Bar

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**Note: Time allowed 2:45 hours.**

## SECTION – B

**Marks: 32**

**Q2: Answer any EIGHT parts. Each part caries equal marks.**

i. Differentiate between mass and weight.

ii. Why white cloths are preferred wearing in summer?

iii. Name the seven S.I base units of measurement.

iv. Derive $S = Vit + \frac{1}{2} at^2$ by graphical method.

v. Is it possible that displacement is zero but not the distance?

vi. Why does one get hurt seriously while jumping on a hard floor?

vii. How you determine the center of gravity of an irregular shape body?

viii. Why it is not easy to whirl a hammer by a longer chain?

ix. Why efficiency of an engine cannot be 100%?

x. What will be the pressure from the surface of the water at a depth of 100 meter?

xi. What are bimetallic strips?

## SECTION – C

**Marks: 21**



**Note: Attempt any THREE of the following. All questions carry equal marks.**

Q3. (a) Define conduction of heat. Describe any two of its applications from daily life.

(b) If 118.9 joule of heat is required to raise the temperature of 15gram of silver through 50°C, calculate the specific heat of silver.

Q4. (a) State and explain Archimedes' principle.

(b) A bullet of mass 40 gram travels at a speed of 1600 m/sec. Find its kinetic energy.

Q5. (a) Differentiate between centripetal and centrifugal force.

(c) A body of 90 gram attached by a string whirls in a horizontal circle of radius 4m. Find the speed of the body if the tension in the string is 60N?

Q6. (a) Define and explain moment of force. On which factors does it depend?

(b) A motor cyclist is moving on a road with an acceleration of $3ms^{-2}$. How much time will it require to change the velocity from $15ms^{-1}$ to $20ms^{-1}$?