

Note: - You have four choices to select the correct type question as A, B, C and D. The choice which you think is correct, fill that circle in front of that question number. Use marker or pen to fill the circles. Cutting or filling two or more circles will result in zero mark in that question. Write PAPER CODE, which is printed on this question paper, on the both sides of the Answer Sheet and fill bubbles accordingly, otherwise the student will be responsible for the situation. Use of ink remover or white correcting fluid is not allowed

(D)	(C)	(B)	(A)	QUESTIONS	Q-1
Mercury	Water	Ice	Copper	Which of the following material has large specific heat?	1
Convection only	Radiation only	Convection and Radiations	Conduction only	Rooms are heated using gas heaters by.	2
Level of a liquid	Volume	Area	Mass	A measuring cylinder is used to measure.	3
Inclined to time-axis	Parallel to time axis	Along distance-axis	Along time-axis	If an object is moving with constant speed then its distance-time graph will be a straight line.	4
Deceleration	Velocity	Acceleration	Speed	By dividing displacement of a moving body with time we obtain	5
$N.ms^{-1}$	N.kg			SI-unit of momentum is.	6
$\frac{v}{r}$	$\frac{mv}{r^2}$		$\frac{mv^2}{r}$	Centripetal acceleration (a_c) represents as.	7
4	3	2	1	The number of perpendicular components of a force are.	8
$\tan^{-1} \frac{F_x}{F}$	$\tan^{-1} \frac{F}{F_x}$	$\tan^{-1} \frac{F_x}{F_y}$	$\tan^{-1} \frac{F_y}{F_x}$	The direction of force F with x-axis is given by.	9
$\frac{1}{4}g$	$\frac{1}{3}g$	$\frac{1}{2}g$	2g	The value of g at a height one earth's radius above the surface of the earth is	10
Momentum	Power	Torque	Energy	Rate of doing work is called.	11
$N.S^{-1}$	$N.m^{-2}$	N.S	$N.m^{-1}$	SI-unit of Pressure is.	12

0915 (جماعت نم) دارنگ اس سوالیہ پرچہ پر اپنے رول نمبر بننے سوا اور کچھ نہ لکھیں۔
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Part I اول

- Answer briefly any Five parts from the followings:- $5 \times 2 = 10$
- Write the definition of physics.
 - What is meant by derived quantities.
 - Write the difference speed and velocity.
 - Define acceleration and write its formula.
 - Define the scalars and vectors.
 - Write the difference between mass and weight.
 - Define momentum and write its unit.
 - Define centripetal force and writes its equation.
- Answer briefly any Six parts from the followings:- $6 \times 2 = 12$
- Define Perpendicular components of a vector.
 - What is the state of Neutral Equilibrium.
 - Define centre of Mass.
 - Why is the value of "g" different at different places.
 - What is a satellite and Geostationary satellite.
 - Write SI unit of work and define the unit of work.
 - Name the Four devices that convert electrical energy into mechanical energy.
 - Write two parts of solar Heating system.
 - When does a force do work? Explain.

- Answer briefly any Five parts from the followings:- $5 \times 2 = 10$
- Describe Archimedes Principle.
 - Define Elasticity.
 - What is meant by Heat capacity. give its equation.
 - What is meant by latent heat of vaporization.
 - Describe the use and range of a clinical thermometer.
 - Why gaps are left in railway tracks. Explain it.
 - Write two uses of non Conductors.
 - What is meant by convection.

Part II دوم

- Note: Attempt any three questions. $7 \times 3 = 21$
- Describe and explain uniform speed and uniform velocity.
 - Find the mass of a Piece of small stone with the help of physical balance.
 - Explain Newton's second Law of motion.
 - The steering of a car has a radius 16 cm. Find the torque produced by a couple of 50 N.
 - Determine the orbital speed of artificial satellites.
 - Calculate the power of pump which can lift 200 kg of water through a height of 6 m in 10 seconds.
 - State Pascal's law and explain the braking system in vehicles.
 - A wooden cube of sides 0.1 m each has been dipped completely in water. Calculate the upthrust of water acting on it.
 - Derive equation of thermal conductivity.
 - Temperature of water in a beaker is $50^\circ C$. What is its value in fahrenheit scale.

Part III (پریکٹیکل)

- Note: Attempt any TWO parts. $5 \times 2 = 10$
- Find the thickness of metal wire with the help of screw gauge.
 - Find the value of 'g' to take length 'l' and time period 'T' of simple pendulum.

Least count = 0.01 mm = لیسنٹ کاؤنٹ

Zero error = 0 = زیر اوبار

Sr.No	میں سکیل ریڈنگ	مگر سکیل کا منطبق رول	$X = n \times L.C$	Thickness
	Main scale Reading	Conciding line		موٹائی
	M(mm)	n.		M+x
1	1.5 mm	6		
2	1.4 mm	7		

Average thickness = اوسط موٹائی

(b) سادہ پنڈولم کی لمبائی 'l' اور نام پرپٹ T لیکر 'g' کی قیمت معلوم کیجئے۔

$d = 4 \text{ cm}$ $r = 2 \text{ cm}$

Sr. No	لمبائی	کل لمبائی	10 vib کا وقت	Time period	T^2
	l_1	$l = l_1 + r$	Time for 10 vib	نام پرپٹ	
	length	Total length	t	T	
1	60 cm		10 S		
2	70 cm		14 S		

Find 'g' =

(c) Define density and write its equation.

How will find the density of thing lighter than water (wood, cork, piece of silfo foam)