

نوٹ:- ہر سوال کے چار ممکنہ جوابات C, B, A اور D سے دیے گئے ہیں۔ درست جواب کے مطابق متعلقہ دائرہ کو مار کر بائیں سے بھر دیجئے۔ ایک سے زیادہ دائروں کو بھر کرنے یا کات کرنے سے اس سوال کا جواب غلط تصور ہوگا۔ جوابی کاپی کے دونوں اطراف اس سوالیہ پرچہ پر مسلوہ PAPER CODE درج کر کے اس کے مطابق دائرے بھر کر لیں، غلطی کی صورت میں اس کا استعمال ممنوع ہے۔

Note:- You have four choices for each objective 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
Radiation	Convection	Conduction	Molecular collision	In gases, Heat is mainly transferred by	1
9	7	6	3	The number of base units in SI are	2
5 m s <sup>-1</sup>	10 m s <sup>-2</sup>	Zero	- 10 m s <sup>-1</sup>	A ball is thrown vertically upward its velocity at the highest point is	3
Vibratory	Random	Rotatory	Circular	The motion around its axis is called	4
N s <sup>-1</sup>	N s	Kgms <sup>-2</sup>	Nm	Unit of Momentum is	5
Surface	Velocity	Mass	Force	Inertia depends upon	6
1	0.707	0.5	Zero	Sin 45° is equal to	7
Lowering	Decreasing	Increasing	Decreasing	Racing cars are made stable by	8
6 × 10 <sup>24</sup> N	6 × 10 <sup>24</sup> Kg	6 × 10 <sup>14</sup> Kg	6 × 10 <sup>4</sup> Kg	The mass of Earth is equal to	9
Electric cell	Photo cell	Electric generator	Electric bulb	The device converts Light Energy into Electrical energy	10
10 <sup>3</sup> N m <sup>-2</sup>	10 <sup>2</sup> N m <sup>-2</sup>	1 N m <sup>-2</sup>	10 <sup>4</sup> N m <sup>-2</sup>	One Pascal is equal to	11
98.6 °C	37 °F	15 °C	37 °C	Normal human body temperature is	12

0915 (جماعت نمبر) وارنٹک: اس سوالیہ پرچہ پر اپنے رول نمبر سے سوا اور کچھ نہ لکھیں۔  
 فرس (انٹرنیٹ) (نئی سیم 1100 مارکس) (سیشن 2012-14 to 2014-16) سیکڑی پارٹ (I)  
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Part I اول حصہ

Answer briefly any Five parts from the followings:- 5x2=10

- What is meant by International System of units.
- In Physics, what is importance of scientific notation in writing quantities.
- Define acceleration. Write its units.
- Define speed and write its formula.
- Define vector quantities.
- Prove that F = ma
- Describe two situations in which force of friction is needed.
- State the Newton's First law of motion.

Answer briefly any Six parts from the followings:- 6x2=12

- Define Rigid body.
- Differentiate between Torque & Couple.
- On what factors the orbital speed of a satellite depends?
- Define gravitational field strength.
- What is meant by power? Write down its S.I. unit.
- How can you find the efficiency of a system?
- Define mechanical energy.
- Why fossil fuels are called non-renewable form of energy?
- When a body is said to be in equilibrium?

Answer briefly any Five parts from the followings:- 5x2=10

- Define stress and strain.
- Define Hooke's Law and write its equation.
- Define Fahrenheit scale and Kelvin scale.
- Define specific Heat capacity and write its S.I. unit.
- Give two uses of cooling effect by evaporation.
- Define consequences of thermal Expansion and write its example.
- Define thermal conductivity and write its equation.
- Write two uses of conductors and Non-conductors.

Part II دوم حصہ

Note: Attempt any three questions. 7x3=21

- Derive third equation of motion with the help of graph
- Express the following quantities using prefixes  
(i) 5000 g (ii) 225 × 10<sup>-8</sup> s (iii) 52 × 10<sup>-10</sup> Kg
- State second law of motion and derive equation F = ma
- Find the perpendicular component of a force of 50 N making an angle of 30° with x - axis.
- State the law of gravitation and proved its equation.
- A car weighing 12 K N has speed of 20 ms<sup>-1</sup>. Find its kinetic energy.
- What is meant by Young's Modulus. Calculate its mathematical expression and write its SI - units.
- An object has weight 18 N in air. Its weight is found to be 11.4 N when immersed in water. Calculate its density.
- What is meant by convection current and write its usage.
- A brass rod is 1 m long at 0 °C. Find its length at 30 °C. Coefficient of linear expansion of brass is 1.9 × 10<sup>-5</sup> K<sup>-1</sup>.

Part III (پریکٹیکل) سوم حصہ

Note: Attempt any TWO parts. 5 x 2 = 10

- Find the acceleration of ball with incline angle iron.

S.No	فاصلہ Distance s	وقت Time t	2S	S <sup>2</sup>
1	20 cm	3s		
2	30 cm	5s		

Find Acceleration a = \_\_\_\_\_

(b) ثابت کیجئے کہ سادہ پنڈولم کا انحصار امپلیٹیوڈ پر نہیں۔  
 Prove that the time period of simple pendulum is independent of amplitude.

S.No	Amplitude x	20 vib کا وقت Time for 20 vib	Average Time اوسط نام	Time period T = 1/20
1	5 cm	12 s	12 s	
2	7 cm	13 s	13 s	

Average time period T<sub>ave</sub> = \_\_\_\_\_

- How can fly in air a balloon filled with hot air with a lot of weight
- Why poly starin cup is used instead of metal calorimeter to find the specific heat of solid object.