

Roll No. _____

(For all sessions)

Paper Code 5 4 7 3

Physics (Objective Type)

Group-I-کروپ
RWP-121

فزکس (معرضی)

Marks: 12

Time: 15 Minutes وقت: 15 منٹ

نمبر: 12

نوٹ: تمام سوالات کے جوابات دی گئی معروضی جوابی کاپی پر لکھیں ہر سوال کے چار ممکنہ جوابات A, B, C, D دیے گئے ہیں، جس جواب کو آپ درست سمجھیں، جوابی کاپی پر اس سوال نمبر کے سامنے جو A, B, C, D کے دائروں میں سے متعلقہ دائرے کو مار کر یا پیچن کی سیاق سے مکر دیں۔

NOTE: Write answers to the questions on objective answer sheet provided. Four possible answers A, B, C & D to each question are given. Which answer you consider correct, fill the corresponding circle A, B, C or D given in front of each question with Marker or pen ink on the answer sheet provided.

- Density has formula: 1.1. ڈینسٹی کا فارمولا ہے:

(A) mass x volume (B) volume/mass
(C) area/mass (D) mass/volume
- Which of the following materials has large value of temperature coefficient of linear expansion? 2. درج ذیل میں سے کس میٹریل کے طویل پھیلاؤ کے کو اعلیٰ قیمت کی قیمت زیادہ ہوتی ہے؟

(A) Aluminium (B) Steel (C) Gold (D) Brass
- What happens to the thermal conductivity of a wall if its thickness is doubled? 3. کسی دیوار کی موثر دوگنا کرنے پر اسکی حرمل کنڈکٹیوٹی:

(A) becomes double (B) remains the same
(C) becomes half (D) becomes one fourth
- An interval of 200 μs is equivalent to: 4. 200 μs کیٹرو سکینڈ کا وقت مساوی ہوتا ہے:

(A) 0.2 S (B) 0.02 S (C) 2×10^{-4} S (D) 2×10^{-6} S
- By dividing displacement of a moving body with time, we obtain: 5. کسی متحرک جسم کے ڈس پلیسمنٹ کو وقت پر تقسیم کرنے سے حاصل ہوتا ہے:

(A) Speed (B) acceleration (C) Velocity (D) Deceleration
- Newton's first law of motion is valid only in the absence of: 6. کسی کی غیر موجودگی میں نیوٹن کے پہلے قانون کا اطلاق ہوتا ہے؟

(A) Velocity (B) Net force (C) Torque (D) Momentum
- SI unit of acceleration is: 7. ایکسلریشن کا SI یونٹ ہے:

(A) $m s^{-1}$ (B) $m s^{-2}$ (C) $m^2 s$ (D) $m s^2$
- A force of 10N is making an angle of 30° with the horizontal. Its horizontal component will be: 8. 10 نیوٹن کی ایک فورس x- ایکسز کے ساتھ 30° کا زاویہ بناتی ہے۔ اس فورس کا افقی کمپونینٹ ہوگا:

(A) 4N (B) 5N (C) 7N (D) 8.7N
- Torque τ is equal to: 9. ٹارک τ برابر ہے:

(A) $F \times m$ (B) $F \times R^2$ (C) $F \times r$ (D) $F \times L$
- The value of g on moon's surface is $1.6 m s^{-2}$. What will be the weight of a 100Kg body on the surface of the moon? 10. چاند کی سطح پر g کی قیمت $1.6 m s^{-2}$ ہے۔ چاند پر 100Kg کے ایک جسم کا وزن ہوگا۔

(A) 100N (B) 160N (C) 1000N (D) 1600N
- If the velocity of a body becomes double, then its kinetic energy: 11. اگر کسی جسم کی ولاشی دوگنا ہو جائے تو اسکی کائیٹک انرجی:

(A) remains the same (B) becomes double
(C) becomes four times (D) becomes half
- The energy of a moving body during motion is called: 12. حرکت کے دوران کسی جسم کی انرجی کہلاتی ہے:

(A) Nuclear Energy (B) Chemical energy
(C) Kinetic energy (D) Potential energy

Roll No. _____

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S.S.C. - (Part-I) - A-2021

(For all sessions)

فزکس (انتائیہ) RW P-91-21 گروپ I
وقت: 1:45 گھنٹے

کل نمبر: 48

10=5x2

10=5x2

10=5x2

18=2x9

04

05

04

05

04

05

Physics (Essay Type)

Time: 1:45 Hours

Group-I

(For all sessions)

Total Marks: 48

Section-I

2- Write short answers of any five part from the following.

i. Differentiate between scalars and vectors.

ii. What is meant by vernier constant?

iii. What are prefixes? Give an example.

iv. Define speed and velocity.

v. What is the law of Inertia?

vi. Define acceleration and write its formula.

vii. Write two ways to reduce friction.

viii. What is difference between base quantities and derived quantities?

3- Write short answers of any five part from the following.

i. Define like and unlike parallel forces.

ii. Define Geostationary orbit.

iii. Define clockwise and anticlock wise moment.

iv. Define force of Gravitation and give two examples.

v. What is meant by an ideal system?

vi. Define Torque and write its formula.

vii. What is the unit of power? Define its unit.

viii. What is meant by Satellite and Natural Satellite?

4- Write short answers of any five part from the following.

i. Define temperature and write its unit in SI.

ii. What is meant by atmospheric pressure?

iii. Define density. Write its unit in SI.

iv. What is meant by thermal equilibrium?

v. State Hook's law.

vi. Why does transfer of heat in fluids take place by convection?

vii. Differentiate between conduction and convection.

viii. Define specific heat capacity and write its unit.

Section -II

Note: Answer any two questions from the following.

9x2=18

5. (a) With the help of speed-time graph prove that $V_f = V_i + at$.

(b) How much is the force of friction between a wooden block of mass 5Kg and the horizontal marble floor? The coefficient of friction between wood and the marble is 0.6.

6. (a) Define equilibrium and explain the first condition of equilibrium.

(b) Calculate the power of a pump which can lift 200Kg of water through a height of 6m in 10 seconds.

7. (a) State Pascal's law and explain hydraulic press.

(b) A brass rod is 1m long at 0°C . Find its length at 30°C . (Co-efficient of linear expansion of brass = $1.9 \times 10^{-5} \text{K}^{-1}$).

226-09-A