Paper Physics Class 9th 2013
Faisalabad Board

Time : 15 Min   Objective Type (Group II)   Total Marks : 12

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.

S #	Questions	A	B	C	D
1	Racing cars are made stable by.	Increasing their speed	Decreasing their mass	Lowering their centre of gravity	Decreasing their width
2	Coefficient of friction between glass and glass is.	0.9	1.0	0.8	0.2
3	Equation of momentum is.	$P = \frac{m}{v}$	$P = mv^2$	$P = (mv)^2$	$P = mv$
4	Complete the equation. $vf^2 - vi^2 =$ _____	S	Vav	2as	t
5	See-saw game is example of __ motion.	Rotatory	Circular	Random	Vibratory
6	A measuring cylinder is used to measure.	Mass	Area	Volume	Level of liquid
7	In gases, heat is mainly transferred by.	Molecular collision	Conduction	Convection	Radiation
8	In the thermal expansion $\beta =$ _____	$\frac{\alpha}{3}$	3α	2α	4α
9	Density = _____.	$\frac{Mass}{Volume}$	$\frac{Weight}{Volume}$	$\frac{Weight}{Mass}$	$\frac{Mass}{Time}$
10	Power is equal to.	$w \times t$	$\frac{w}{t^2}$	$\frac{w^2}{t}$	$\frac{w}{t}$
11	Earth's gravitational force of attraction vanishes at.	6400km	Infinity	42300km	1000km
12	A pencil lying horizontally is the example of.	Equilibrium	Stable equilibrium	Non stable equilibrium	Neutral equilibrium

Marks : 63   ☆ Subjective (Part-I) ☆   Time: 02:45

2.   Write short answers of any Five parts.   (5 × 2 = 10)
   (i)   Write the names of four derived units.   (ii)   What are prefixes?
   (iii) Define two types of motion.   (iv)   Write four examples of vectors.
   (v)   Differentiate between speed and velocity.
   (vi) Define acceleration and write its SI unit. (vii) Satate Newton's first law of motion.
   (viii) Write two advantages and two disadvantages of friction.

3.   Write short answers of any Six parts.   (6 × 2 = 12)
   (i)   Write the principle of moments.   (ii)   Define torque and write its SI unit.
   (iii) Differentiate between centre of mass and centre of gravity.
   (iv) Define gravitional field strength. What is its value near the surface of earth?
   (v)   Why is the value of 'g' different at different places?
   (vi) Write SI unit of work and define the unit of work.
   (vii) Define mechanical energy and give two examples.
   (viii) Differentiate between non-renewable and renewable sources of energy.
   (ix) A machine does 9J of work in 3S. Calculate its power.

4.   Write short answers of any FIVE parts.   (5 × 2 = 10)
   (i)   Write two properties of plasma (fourth state of matter).
   (ii)   On what factors pressure of liquid depends?
   (iii) How temperature determines the direction of flow of heat?
   (iv) Describe Fahrenheit scale.   (v)   Define specific heat.   (vi) Define heat capacity.
   (vii) What is the effect of length of the solid on thermal conductivity?
   (viii) Describe relation of radiation of heat and surface area.

☆ Subjective (Part-II) ☆
Attempt any two Questions. Each question has (7 × 3 = 21) marks.

5. (a)   Define translatory motion. Also state its three types.   4

   (b)   A chocolate wrapper is 6.7cm long and 5.4cm wide. Calculate its area upto reasonable number of significant figures.   3

6. (a)   Define momentum. Mathematically prove the relation between force and momentum.   4

   (b)   A picture frame is hanging by two vertical strings. The tension in the strigns are 3.8N and 4.4N. Find the weight of the picture frame.   3

7. (a)   Define and explain the law of graviation.   4

   (b)   A 50kg man moved 25 steps up in 20 seconds. Find his power, if each step is 16cm high.   3

8. (a)   Define and explain latent heat of fusion.   4

   (b)   Find the volume of a brass cube at $100^\circ C$ whose side is 10cm at $0^\circ C$. While coefficient of linear thermal expansion of brass = $1.9 \times 10^{-5} k^{-1}$.   3

9. (a)   Explain green house effect.   4

   (b)   How much heat is required to increase the temperature of 0.5kg of water from $10^\circ C$ to $65^\circ C$?   3

☆ Subjective (Part-III) Practical Part ☆
Attempt any two Questions. Each question has (5 × 2 = 10) marks.

10. (a)   Find the vlaue of e.g. The data is collected by free fall apparatus. Height , h=50cm, Time period, T=1.28s.

   (b)   Diameter of a solid cylinder measured by a vernier callipers is 0.74cm. There is a positive zero error of 0.02cm in the vernier callipers. Find the corrected diameter of the cylinder applying zero correction.

   (c)   Draw graph between time and temperature when ice is converted into water and water is into steam by show heating.

Time (min)	0	2	4	6	8	10	12	14	16	18
Temperature $^\circ C$	-30	-20	0	20	40	60	80	100	120	140