BOARD OF SECONDARY EDUCATION KARACHI
NEW MODEL QUESTION PAPER
S.S.C. (ANNUAL) EXAMINATIONS
PHYSICS (THEORY) PAPER-I
CLASS IX (SCIENCE GROUP)

Time: 3 Hours   (Marks: 60)

SECTION "A" (20%)
MULTIPLE CHOICE QUESTIONS (MCQs)   (12 Marks)

Q.1.   **12 MCQs will be given from whole syllabus. Each carries <u>1 Mark.</u>**

SECTION "B" (40%)
(SHORT ANSWERS QUESTIONS)   (24 marks)

Note: Answer any Eight (8) questions from this section. Each carries 3 marks.

02   Define significant figure. Determine the number of significant figure in:

    i)   1.33   ii)   0.0012   iii)   7.00   iv)   0.00101

03   Write down any three differences between Speed and Velocity.

04   State Newton's second law of motion. Show the relationship between applied force and the accelerationproduced in the body.

05   What is Moment of force? write its formula with unit and factors (Only name) does it depends.

06   What is Temperature? Write the formulae to convert Temperature from
    (i)   Celsius to Kelvin   (ii)   Fahrenheit to Celsius scale

07   What is Work? Also derive the equation $W = F.d \cos\theta$

08   What is the mass of a solid iron wrecking ball of radius 18 cm. if the density of iron is 7.8 gm / cm^3?

09   A car moving on a road with velocity 30 m/s. when brakes are applied its velocity decreases at a rate of 6meter per second (decelerated a=6 m/s²). Find the distance it will cover before coming to rest.

10   A gardener is driving a lawnmower with a force of 80 N that makes an angle of 40° with the ground.
    (i)   Find its horizontal component   (ii)   Find its vertical component

11   How much force is needed to pull a spring to a distance of 30 cm, the spring constant is 15 N/m.

12   Determine the gravitational force of attraction between Hamza and Ahmed standing at a distance of 50 mapart. The mass of Hamza is 60kg and that of Ahmed is 70 kg. (G = 6.673 x 10^{11} Nm²kg⁻²)

13   A container holds 30 m³ of air at a pressure of 150000 Pa. If the volume changed to 10 m³ by decreasingload on the piston. What will the pressure of the gas become? Assume that its temperature remains constant.

SECTION- "C" 40%
(DESCRIPTIVE ANSWER QUESTIONS)   (24 Marks)

Note: Answer any four (04) questions from this section. Each carries 6 marks.

14   Write two advantages and two disadvantages of friction. Write two methods of reducing friction.

15   What do you mean by fluid pressure? Derive an expression for pressure inside a liquid. And on whatfactors do it depend.

16   What is artificial satellite? Prove that the velocity of satellite orbiting around the earth is given by:

$$v = \sqrt{g_h \left(R_E + h \right)}$$

17   State and explain Boyle's law. Also describe any one application of Boyle's law in daily life.

18   Define Kinetic Energy and Potential Energy. Also derive the equation K.E = ½ m v².

19   What is Evaporation? and describe factors influencing surface Evaporation process.

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