



INDIAN SCHOOL MUSCAT

SECOND PERIODIC TEST

PHYSICS

CLASS: XI

Sub.Code: 042

Time Allotted: 50mts.

06.01.2019

Max. Marks: 20

GENERAL INSTRUCTIONS:

1. All questions are compulsory. There are 11 questions in all.

2. Question no 1 to 5 carry one mark each.

3. Question no 6 to 8 carry two marks each.

4. Question no 9 to 11 carry three marks each.

1. Why are springs made of steel and not copper? 1
2. Why are the bags and suitcases provided with broad handles? 1
3. Define coefficient of viscosity of a liquid. 1
4. What do you mean by a streamline flow of liquid? 1
5. Why it is dangerous to stand near the edge of the platform when a fast train is crossing it? 1
6. A spherical ball contracts in volume by 0.01%, when subjected to uniform normal pressure of 100 atmospheres. Calculate the bulk modulus of the material. (1 Atmospheric pressure = $1 \times 10^5 \text{ N/m}^2$) 2
7. A metal plate of area 0.02 m^2 is lying on a liquid layer of thickness 10^{-3} m and coefficient of viscosity 120 poise. Calculate the horizontal force required to move the plate with speed of 0.025 ms^{-1} . 2
8. On the basis of stress-strain curve, distinguish between ductile and brittle materials. 2
9. Define terminal velocity and find the expression for the terminal velocity in case of a sphere falling through a viscous liquid such as glycerin. 3
10. State and prove Bernoulli's theorem. 3
11. The cylindrical tube of a spray pump has a cross-section of 8.0 cm^2 , one end of which has 40 fine holes each of diameter 1.0 mm. If the liquid flow inside the tube is 1.5 m/min. What is the speed of ejection of the liquid through the holes? 3

End of the Question Paper