ST. LAWRENCE HIGH SCHOOL

A JESUIT CHRISTIAN MINORITY INSTITUTION

Sub: Physical Science **Class: 8** **Date: 22.04.20**

Duration: 40 min **Worksheet14** **Full Marks: 15**

PHYSICAL QUANTITIES AND MEASUREMENT/ DENSITY OF SOLIDS

Choose the Correct options:

1. The density of an object is
   (a) The mass divided by the volume D = m/v
   (b) The volume divided by the mass D = v/m
   (c) The same as its weight
   (d) The same as the size of the object
2. State the SI unit of density.
   (a) kg m^{-3}
   (b) g cm^{-3}
   (c) g cc^{-1}
   (d) mole L^{-1}
3. If two objects have the same volume but one has a greater mass, the one with greater mass
   (a) Has a lower density
   (b) Has a higher density
   (c) Will float
   (d) Will sink
4. If two objects have the same volume but one is made up of smaller and heavier atoms, the one with small heavy atoms will
   (a) Be larger than the other
   (b) Be less dense than the other
   (c) Be more dense than the other
   (d) Float
5. If you cut a wooden block in half, each half would have
   (a) Half the density of the original piece
   (b) Twice the density of the original piece
   (c) The same density as the original piece
   (d) No density at all
6. Express g cm^{-3} as kg m^{-3}
   (a) 1000 g cm^{-3}=1 kg m^{-3}
   (b) 1 g cm^{-3}=1000 kg m^{-3}
   (c) 15 g cm^{-3}=125 kg m^{-3}
   (d) 75 g cm^{-3}=100 kg m^{-3}
7. A cube of edge 5 cm has density 8 g cm^{-3}. Find its mass.
   (a) 1 kg
   (b) 120 g
   (c) 40 g
   (d) 125 g
8. The density of a block of wood is 0.8 g cm^{-3}. Find the volume of a block whose mass is 320 g.
   (a) 300 cm^3
   (b) 400 cm^3
   (c) 500 cm^3
   (d) 800 cm^3

9. The area of cross section of a cylindrical metal block is 20 cm^2. If the mass of the block is 5 kg find the height of the cylinder. Given that density of the block is 12.5 gcm^{-3}.
   (a) 25 cm
   (b) 24 cm
   (c) 20 cm
   (d) 15 cm
10. In the water displacement method for finding volume
   (a) You subtract the final volume from the initial volume
   (b) You subtract the initial volume from the final volume
   (c) You add the initial and final volumes
   (d) You divide the final volume by 2
11. If two objects have the same mass but different volumes
   (a) The one with the larger volume has the lower density
   (b) They must have the same density
   (c) The one with the larger volume has the higher density
   (d) The one with the larger volume is twice as dense
12. If the density of water is 1 gram/cm^3, this means that the mass of 100 cm^3 of watershould be
   (a) 100 grams
   (b) 50 grams
   (c) 1000 grams
   (d) 1 gram
13. Density is a characteristic property of a substance. This means that the density of water
   (a) Changes depending on the volume
   (b) Stays the same regardless of the volume
   (c) Is greater for a greater mass of water
   (d) Is less for a smaller mass of water
14. To find the mass of water in a graduated cylinder, you could
   (a) Take the total mass of the water and graduated cylinder and subtract the mass ofthe water
   (b) Take the total mass of the water and graduated cylinder and subtract the mass ofthe graduated cylinder
   (c) Add the mass of the water to the mass of the graduated cylinder
   (d) Take the total mass of the water and graduated cylinder and divide the mass by two
15. An irregular solid of mass 36 g displaces 120 ml of a liquid from an Eureka can. What is the density of the solid?
   a) 0.35 g cm^{-3}
   b) 0.6 g cm^{-3}
   c) 300 kg m^{-3}
   d) 30 kg m^{-3}