



INDIAN SCHOOL DARSAIT
DEPARTMENT OF SCIENCE



Subject : PHYSICS	TOPIC:GRAVITATION-PART II	Worksheet no#05
Resource Person: Ms Sonia Antony		Date : 29/10/17
Name of the Student : _____	Class & Division : _____	Roll Number: ____

Q.NO	QUESTIONS	MARKS										
1	What is the density of water in S I unit?	1										
2	When does the buoyant force become maximum?	1										
3	Why the tip of the needle is sharp?	1										
4	Write two applications of Archimedes' Principle.	1										
5	Name the factors on which the buoyant force depends.	1										
6	Write the difference between density and relative density.	2										
7	<p>A body immersed once in each of the following media</p> <table border="1"><thead><tr><th>SUBSTANCE</th><th>DENSITY(Kg/m³)</th></tr></thead><tbody><tr><td>1. Mustard oil</td><td>921</td></tr><tr><td>2. Water</td><td>1000</td></tr><tr><td>3. Glycerin</td><td>1260</td></tr><tr><td>4. Petrol</td><td>737.2</td></tr></tbody></table> <p>In which case will there be maximum apparent loss of weight and why?</p>	SUBSTANCE	DENSITY(Kg/m ³)	1. Mustard oil	921	2. Water	1000	3. Glycerin	1260	4. Petrol	737.2	2
SUBSTANCE	DENSITY(Kg/m ³)											
1. Mustard oil	921											
2. Water	1000											
3. Glycerin	1260											
4. Petrol	737.2											
8	Why does a nail sink in water but a piece of cork floats on it?	2										
9	A solid exerts a pressure of 40 Pa on a surface 4m ² .Find its weight.	2										
10	Relative density of an object is 0.45.will it float or sink in water? Why?	2										

11	An object weighs 20N in air. When immersed fully in water, it weighs 11N. Find the weight of the liquid displaced by the object.	2
12	Which will exert more pressure 100 kg mass on 10m ² or 50kg mass on 4 m ² . Give reason.	2
13	A thrust of F N is exerted on area 3A and a thrust of 3FN is exerted on area A/4. Find the ratio of pressure exerted.	2
14	The volume of 50g of a substance is 20cm ³ . If the density of water 1g/cm ³ , Will the substance float or sink?	2
15	Calculate the density of solid which weighs 21 N in air and 18N in water.	2
16	The relative density of gold is 19.3, What is its density in g/cm ³ and kg/m ³	2
17	The density of turpentine is 840kg/m ³ . What is its relative density?	2
18	Define SI unit of pressure.	2
19	Find the pressure at a point 10m below the surface of sea. What will be the thrust on the body of a diver at that depth if the area of the diver's body is 1.5m ² . Assume density of sea water to be 1.1 g/cm ³ and g=10m/s ² .	3
20	Relative density of iron is 7.8. What will be the mass of iron brick with dimensions 10cmx20cmx40cm?	3