ST. LAWRENCE HIGH SCHOOL

27, BALLYGUNGE CIRCULAR ROAD

Class : 9 **Subject : PHYSICAL SCIENCE** **Term : FIRST TERM** **Max Marks : 60**

Q 1 : Nishant Is Writing Some Statements But He Confused To Know Whether The Statements Are Correct Or Not? Would You Help Him? **Marks :** 1

1 . Sulphuric acid is used in the manufacture of fertilisers, paints, dyes, chemicals, plastics, synthetic fibres etc.

2 . Nitric acid is used for making fertilisers, explosives etc.

3 . Hydrochloric acid is used for removing oxide film from steel objects and used in dye-stuffs, textile, food and leather industries.

4 . All the above. ☑ (This Answer is Correct)

Q 2 : In A Science Exam, You Are Asked A Question Where You Have To Choose The Statement Which Is/ Are Incorrect? **Marks :** 1

1 . Curd and other sour foodstuffs such as vinegar, lemon juice and orange juice, etc., should not be kept in metal vessels like copper vessels.

2 . If someone is suffering from the problem of acidity after over eating, we can suggest taking baking soda solution as remedy.

3 . Egg-shells, limestone, marble and chalk are the different forms calcium carbonate.

4 . None of the above ☑ (This Answer is Correct)

Q 3 : An aqueous solution turns red litmus solution blue. Excess addition of which of the following solution would reverse the change? **Marks :** 1

1 . Baking powder

2 . Lime

3 . Ammonium hydroxide solution

4 . Hydrochloric acid ☑ (This Answer is Correct)

Q 4 : The buoyant force on an object equals 250 N. What is the weight of the displaced water? **Marks :** 1

1 . 250 N ☑ (This Answer is Correct)

2 . less than 250 N

3 . more than 250 N

4 . 25 N

Q 5 : An object weighs 500 N. It displaces 150 N of water. While in water, the object's weight is **Marks :** 1

1 . 23.33 N

2 . 650 N

3 . 450 N

4 . 350 N (This Answer is Correct)

Q 6 : What is the value of 15 Pa in CGS unit? **Marks :** 1

1 . 15

2 . 150 (This Answer is Correct)

3 . 1500

4 . 150000

Q 7 : When a solution of an acid contains larger amount of acid, it is said to be- **Marks :** 1

1 . dilute

2 . concentrated (This Answer is Correct)

3 . saturated

4 . unsaturated

Q 8 : Metals like sodium, potassium and calcium react with an acid to liberate- **Marks :** 1

1 . hydrogen (This Answer is Correct)

2 . water

3 . carbon dioxide

4 . salt

Q 9 : Which of the following is a weak acid? **Marks :** 1

1 . Sulphuric acid

2 . hydrochloric acid

3 . acetic acid (This Answer is Correct)

4 . nitric acid

Q 10 : The chemical formula of baking soda is **Marks :** 1

1 . NaCl

2 . NaHSO4

3 . NaHCO3 (This Answer is Correct)

4 . Na2CO3.10H2O

Q 11 : Salt form during reaction of sulphuric acid with copper **Marks :** 1

1 . CuO
2 . Cu2O
3 . CuSO4 (This Answer is Correct)
4 . Cu(HSO4)2

Q 12 : The acid present in vinegar **Marks :** 1

1 . Formic acid
2 . Tartaric acid
3 . Citric acid
4 . Acetic acid (This Answer is Correct)

Q 13 : Acid reacts with---------- of metals to form salt and water. **Marks :** 1

1 . Chlorides
2 . Hydroxides (This Answer is Correct)
3 . Carbonates
4 . Sulphates

Q 14 : H2SO4 can be prepared by reaction of water with- **Marks :** 1

1 . SO2
2 . SO3 (This Answer is Correct)
3 . H2S
4 . PbS

Q 15 : A compound that reacts with an acid to form a salt and water is called **Marks :** 1

1 . base (This Answer is Correct)
2 . salt
3 . sulphate
4 . chloride

Q 16 : To protect tooth decay we are advised to brush our teeth regularly. The nature of the tooth paste commonly used is **Marks :** 1

1 . Acidic
2 . basic (This Answer is Correct)
3 . neutral
4 . none of these

Q 17 : Which Of The Following Are Present In A Dilute Aqueous Solution Of Hydrochloride Acid? **Marks :** 1

1 . H3O+ + Cl- (This Answer is Correct)

2 . H3O+ + OH-

3 . Cl- + OH-

4 . Unionised HCl

Q 18 : What is formed when zinc reacts with sodium hydroxide? **Marks :** 1

1 . Zinc hydroxide and sodium

2 . Sodium zincate and hydrogen gas (This Answer is Correct)

3 . Sodium zinc-oxide and hydrogen gas

4 . Sodium zincate and water

Q 19 : Which of the following acids are not used in the production of trinitrotoluene? **Marks :** 1

1 . Sulphuric acid

2 . Nitric acid

3 . Hydrochloric acid (This Answer is Correct)

4 . All of these are used

Q 20 : When copper oxide and dilute hydrochloric acid react, colour changes to **Marks :** 1

1 . white

2 . bluish green (This Answer is Correct)

3 . blue-black

4 . brown

Q 21 : Sodium hydroxide is used **Marks :** 1

1 . as an antacid

2 . in manufacture of soap (This Answer is Correct)

3 . as a bleaching agent

4 . in alkaline batteries

Q 22 : Sodium hydroxide turns phenolphthalein solution **Marks :** 1

1 . pink (This Answer is Correct)

2 . yellow

3 . colourless

4 . orange

Q 23 : Which of the following is not a monobasic acid? **Marks :** 1

1 . HCl
2 . HNO3
3 . H2SO4 (This Answer is Correct)
4 . CH3COOH

Q 24 : Cellophene is obtained using____ **Marks :** 1

1 . HCl
2 . HNO3 (This Answer is Correct)
3 . H2SO4
4 . CH3COOH

Q 25 : Which among the following displays dehydrating properties? **Marks :** 1

1 . hydrochloric acid
2 . sulphuric acid (This Answer is Correct)
3 . nitric acid
4 . sodium hydroxide

Q 26 : Hydrogen sulphide forms nitric oxide when reacting with nitric acid when the acid is **Marks :** 1

1 . Hot and concentrated
2 . Hot and dilute (This Answer is Correct)
3 . Cold and concentrated
4 . Cold and dilute

Q 27 : Name the catalyst used in the oxidation of HCl by aerial oxygen. **Marks :** 1

1 . calcium chloride
2 . cuprous chloride
3 . cupric chloride (This Answer is Correct)
4 . cobalt chloride

Q 28 : The upward force acting on a body when partially or fully immersed in a liquid is called **Marks :** 1

1 . Thrust
2 . Pressure
3 . Buoyancy (This Answer is Correct)
4 . Surface Tension

Q 29 : Density of a certain liquid is 1.4 g/cc. Calculate the mass of 50 cc of such a liquid. **Marks :** 1

1 . 56 g

2 . 63 g

3 . 70 g (This Answer is Correct)

4 . 140 g

Q 30 : A body will experience the minimum upthrust when it is immersed in which of the following liquids? **Marks :** 1

1 . Turpentine (This Answer is Correct)

2 . water

3 . glycerine

4 . mercury

Q 31 : Archimedes' Principle states that... **Marks :** 1

1 . The buoyant force acting on an object equals the volume of the fluid displaced by the object.

2 . (This Answer is Correct)

The buoyant force acting on an object equals the weight (force of gravity) of the fluid displaced by the object.

3 . The buoyant force acting on an object will always be equal.

4 . Buoyancy and Gravity balance each other

Q 32 : At any point during streamline motion of a liquid if the speed of fluid is high, pressure is _____ **Marks :** 1

1 . high

2 . low (This Answer is Correct)

3 . oscillating

4 . magnified

Q 33 : The unit of strain is **Marks :** 1

1 . per metre

2 . per square metre

3 . per cubic metre

4 . has no unit (This Answer is Correct)

Q 34 : The ratio of longitudinal stress to longitudinal strain is called _____ **Marks :** 1

1 . Young's modulus (This Answer is Correct)

2 . Bulk modulus

3 . Elastic limit

4 . Breaking point

Q 35 : "Within elastic limit, the stress applied on abody is proportional to the strain developed." This is a statement of which law? **Marks :** 1

1 . Bernouli's theorem

2 . Pascal's Law

3 . Hooke's law (This Answer is Correct)

4 . Archimedes Principle

Q 36 : Fluid exerts pressure **Marks :** 1

1 . upwards

2 . downwards

3 . laterally

4 . in all directions (This Answer is Correct)

Q 37 : Free surfaces of a liquid is always _____ **Marks :** 1

1 . vertical

2 . horizontal (This Answer is Correct)

3 . concave

4 . convex

Q 38 : The principle of barometer depends on which law? **Marks :** 1

1 . Archimedes principle

2 . Laws of liquid pressure

3 . Pascal's Law (This Answer is Correct)

4 . Hooke's law

Q 39 : A sudden fall in barometric reading indicates **Marks :** 1

1 . Possibility of rain

2 . Arrival of storm (This Answer is Correct)

3 . Dry weather

4 . Pleasant weather

Q 40 : By how much does the atmospheric pressure change for a rise of 275 m? **Marks :** 1

1 . 2 cm Hg

2 . 2.5 cm Hg (This Answer is Correct)

3 . 3 cm Hg

4 . 6 cm Hg

Q 41 : Artesian Well operated because of the property of liquid pressure which states that **Marks :** 1

1 . Pressure is the same in all direction

2 . Liquid seeks its own level (This Answer is Correct)

3 . Pressure increases with depth

4 . Pressure is the same at all points in the horizontal plane.

Q 42 : The unit of surface tension is **Marks :** 1

1 . newton per metre (This Answer is Correct)

2 . newton per square metre

3 . newton metre

4 . newton

Q 43 : Surface tension _____ with increase in temperature. **Marks :** 1

1 . increases

2 . decreases (This Answer is Correct)

3 . does not change

4 . disappears

Q 44 : The maximum velocity an object achieves while falling through a fluid is called_____ **Marks :** 1

1 . drop velocity

2 . drag velocity

3 . terminal velocity (This Answer is Correct)

4 . steady state

Q 45 : Equation of continuity is a statement of which conservation principle? **Marks :** 1

1 . mass (This Answer is Correct)

2 . charge

3 . energy

4 . volume

Q 46 : When a fluid flows in imaginary layers, a retarding force occurs starting from the upper layer to the lower layers. This property of fluids by virtue of which it opposes the relative motion of its layers is **Marks :** 1

called_____

1 . surface tension

2 . elasticiy

3 . viscosity (This Answer is Correct)

4 . buoyancy

Q 47 : The pH of the gastric juices released during digestion is **Marks :** 1

1 . less than 7 (This Answer is Correct)

2 . more than 7

3 . equal to 7

4 . cannot be determined

Q 48 : Common salt besides being used in kitchen can also be used as the raw material for making (i) soda (ii) bleaching powder (iii) baking soda(iv) slaked lime **Marks :** 1

1 . (i) and (ii)

2 . (i), (ii) and (iv)

3 . (i) and (iii) (This Answer is Correct)

4 . (i),(iii) and (iv)

Q 49 : Which of the following statements is correct about an aqueous solution of an acid and of a base? (i) Higher the pH, stronger the acid (ii) Higher the pH, weaker the acid (iii) Lower the pH, stronger the base (iv) Lower the pH, weaker the base **Marks :** 1

1 . (i) and (iii)

2 . (ii) and (iii)

3 . (i) and (iv)

4 . (ii) and (iv) (This Answer is Correct)

Q 50 : What happens when a solution of an acid is mixed with a solution of a base in a test tube? (i) Temperature of the solution decreases (ii) Temperature of the solution increases (in) Temperature of the solution remains the same (iv) Salt formation takes pla **Marks :** 1

1 . (i) and (iv)

2 . (i) and (iii)

3 . (ii) only

4 . (ii) and (iv) (This Answer is Correct)

Q 51 : In terms of acidic strength, which one of the following is in the correct increasing order? **Marks :** 1

1 . Water < Acetic acid < Hydrochloric acid (This Answer is Correct)

2 . Water < Hydrochloric acid < Acetic acid

3 . Acetic acid < Water < Hydrochloric acid

4 . Hydrochloric acid < Water < Acetic acid

Q 52 : A solid weighs 100 N in air. In a liquid its weight becomes 80 N. Find the relative density of the liquid. **Marks :** 1

1 . 4

2 . 5 (This Answer is Correct)

3 . 8

4 . 10

Q 53 : The weight of a body in air is 33 gf. When completely immersed in a liquid of density 0.75 g/cc its weight is 24 gf. What is the relative density of the body with respect to water at 4oC? **Marks :** 1

1 . 2

2 . 2.25

3 . 2.5

4 . 2.75 (This Answer is Correct)

Q 54 : An object weighs 45 gf in air and 25 gf in water. What is the density of the object in g/cc? [Density of water = 1 g/cc] **Marks :** 1

1 . 1.8

2 . 2.25 (This Answer is Correct)

3 . 3.6

4 . 4.5

Q 55 : Order the following items from LEAST buoyant to MOST buoyant **Marks :** 1

1 . plastic bottle, rock, cork, submarine

2 . rock, submarine, plastic bottle, cork (This Answer is Correct)

3 . cork, plastic bottle, submarine, rock

4 . submarine, cork, rock, plastic bottle

Q 56 : Two wires of the same length and of different material are ties with two equal masses to hang. The diameters of the wire are 1 mm and 2 mm. If the expansion in the first wire is 3 times of the second, compare the young's modulli of the two wires. **Marks :** 1

1 . 2:03

2 . 16:09

3 . 9:16

4 . 4:03 (This Answer is Correct)

Q 57 : If water is used as a barometric liquid what will be the height of the water column? Take density of water = 1 g/cc and density of mercury = 13.6 g/cc **Marks :** 1

1 . 10.34 m (This Answer is Correct)

2 . 100.3 m

3 . 1.1 m

4 . 100 cm

Q 58 : The pressure exerted by alcohol at the bottom of a vessel 0.8 m long is 6400 Pa. What is the relative density of alcohol if acceleration due to gravity is 10 m/s2 **Marks :** 1

1 . 6.4

2 . 0.64

3 . 8

4 . 0.8 (This Answer is Correct)

Q 59 : If the barometric reading of a place be 74.5 cm find the pressure in CGS unit. **Marks :** 1

1 . 9.9 Torr

2 . 9.9 x 105 dyne/cm

3 . 2

4 . 9.9 x 104 Pa

Q 60 : What is the pressure exerted by a liquid of density 0.8 g/cc at a depth of 100 m if acceleration due to gravity is 10 m/s2? **Marks :** 1

1 . 8 x 105 Pa (This Answer is Correct)

2 . 8 x 102 Pa

3 . 8 x 107 Pa

4 . 8 x 103 Pa
