

## Solved Sample Paper

Class VIII

Subject: Science

Max Marks: 80

Time: 3 Hours

### GENERAL INSTRUCTIONS:

- Read the instructions carefully
- All the questions are compulsory.
- Question number 1 to 5 carries 1 mark each.
- Question number 6 is carries 2 marks each.
- Question number 7 carries 5 marks each.

### 1.) State whether the following statements are True or False: -

Marks: 5.0

- A. Petrol is used as solvent for dry cleaning (T/F)
- B. The function of the plasma membrane is to allow movement of substances in and out of cell. (T/F)
- C. Decomposition of an electrolyte on passing electricity is called radiation. (T/F)
- D. Coal gas is obtained during the processing of coal to get coke. (T/F)
- E. The lowest temperature at which a substance catches fire is called its boiling point. (T/F)

### 2.) Fill in the blanks with appropriate answers: -

Marks: 5.0

- A. Naphthalene balls are obtained from coal tar.
- B. Protoplast is called as the living part of the cell which includes the cytoplasm and the nucleus.
- C. The process of depositing a layer of any desired metal on another metallic object, by means of electricity, is called electroplating.
- D. Coal tar is an exhaustible natural resource, a liquid that is a mixture of about 200 substances with an unpleasant smell.
- E. Microbes that are able to reproduce only inside other living cells are called as virus.

### 3.) Multiple Choice Questions (There can be more than one answer right):

Marks: 5.0

- A. Hydrogen gas obtained from natural gas is used in
- Motor fuel
  - Fertilizers
  - Paints
  - Stoves
- B. The cell that is capable of changing its shape is
- White blood cell
  - Amoeba
- Both are correct
  - None of them is correct
  - Only I is correct
  - Only II is correct
- C. The liquids that conduct electricity when electric current is passes through it are
- Lemon juice and vinegar
  - Salt solution and distilled water
  - Milk and honey
  - Vinegar and milk
- D. Coal is processed to get ..... a tough, porous and black substance used in the manufacture of steel and in the extraction of many metals.
- Diesel
  - Coke
  - Coal tar
  - Charcoal
- E. The gas that is used in fire extinguisher to stop the fire is
- NO<sub>2</sub>
  - CO<sub>2</sub>
  - CO
  - SO<sub>2</sub>

4.) Match the items given in two columns: -

Marks: 20

A

Column A	Column B
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Cell wall	Contain chlorophyll for photosynthesis
Nucleus	Helps in intracellular digestion
Mitochondria	Control and coordination of the cell
Vacuole	Protection from unfavourable conditions
Plastids	Generation of energy

Ans.

Column A	Column B
Cell wall	Protection from unfavourable conditions
Nucleus	Control and coordination of the cell
Mitochondria	Generation of energy
Vacuole	Helps in intracellular digestion
Plastids	Contain chlorophyll for photosynthesis

B

Column A	Column B
Sprinkler	Traditional method of irrigation
2,4-D	Storage of grains
Silos	Nitrogen fixation
Rahat	Modern method of irrigation
<i>Rhizobium</i> bacteria	Weedicide

Ans:

Column A	Column B
Sprinkler	Modern method of irrigation
2,4-D	Weedicide
Silos	Storage of grains
Rahat	Traditional method of irrigation
<i>Rhizobium</i> bacteria	Nitrogen fixation

C

Column A	Column B
Mercury	Manufacturing of ammonia
Hydrogen	Common salt
Sodium chloride	Thermometers
Chlorine	Electrical wires
Copper	Disinfectant

Ans:

Column A	Column B
Mercury	Thermometers
Hydrogen	Manufacturing of ammonia
Sodium chloride	Common salt
Chlorine	Disinfectant
Copper	Electrical wires

D.

Column A	Column B
Burning of gas in stove	Inflammable substances
Combustion of coal dust	Rapid combustion
Ignition of fire crackers	Carbon dioxide
Petrol	Spontaneous combustion
Fire extinguisher	Explosion

Ans:

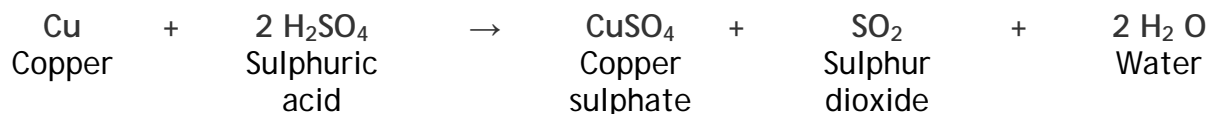
Column A	Column B
Burning of gas in stove	Rapid combustion
Combustion of coal dust	Spontaneous combustion
Ignition of fire crackers	Explosion
Petrol	Inflammable substances
Fire extinguisher	Carbon dioxide

### 5.) Very Short Answer Questions:

Marks: 5.0

A. Write the chemical reaction when dilute sulphuric acid is poured on a copper plate.

Ans.



B. Why is it important to loosen the soil before sowing the seeds?

Ans. Loosening the soil allows the roots of crops to penetrate deep into the soil. In addition, the loose soil allows the roots to breathe easily even when they travel deep into the soil.

C. Name the planet which  
a. Rotates east to west  
b. Red planet

Ans. a. Venus

b. Mars

D. Which hormone is secreted by the following glands?

a. Pancreas

b. Thyroid gland

Ans. a. Insulin

b. Thyroxine

E. Define metamorphosis

Ans. The change from larva to adult is called metamorphosis.

**6.) Short Answer Questions:**

**Marks: 20.0**

A. What will happen if too many seeds are sown close to each other?

Ans. If too many seeds are sown close to each other there would be severe competition for resources and ultimately the fittest one would only survive. Also the ability of the plant to inhabit wider area also gets decreased.

**B. How are the nutrients present in dead plants and animals absorbed by living plants?**

Ans. The dead plants and animals get decomposed by soil organisms. Thus, the various nutrients held in the dead organisms are released back into the soil. These nutrients are then absorbed by plants.

**C. Which is the most efficient method of irrigating the fields? What are its advantages over other methods?**

Ans. Drip irrigation is the most efficient method of irrigating the field.

- It is the best technique for watering plants, gardens and trees, in regions of water scarcity.
- Since water is supplied drop by drop at the position of the roots, there is no water wastage.

**D. Differentiate between thermoplastic and thermosetting plastics**

Ans.

Thermoplastics	Thermosetting plastics
Some plastic articles can bend easily while some break when forced to bend. When we add hot water to a plastic bottle, it gets deformed. Such plastic which gets deformed easily on heating and can be bent easily are known as thermoplastics.	There are some plastics which when moulded once, cannot be softened by heating. These are called thermosetting plastics.
Polythene and PVC are some of the examples of thermoplastics.	Two examples are bakelite and melamine.

**E. A star is eight light years away from the Earth. What do you understand by light year?**

Ans. It is the distance travelled by light in one year. The speed of light is about 300,000 km per second. Thus, the distance between earth and that star would be  $300,000 \times 8$

= 2400000 km/sec or  $24 \times 10^8$  m/sec.

**F. Name any two celestial bodies other than the planets and the stars.**

Ans. Comets - These are made of ice and mud. These revolve around sun in large and highly elliptical orbit.

Meteors - These are the small rocks or the left out pieces of Comet.

**G. How is an earthquake caused?**

Ans. The outermost layer of the earth is fragmented called as tectonic plate. These plates are in continual motion. When they brush past one another, or a plate goes under another due to collision, they cause disturbance in the earth's crust. It is this disturbance that shows up as an earthquake on the surface of the earth.

**H. Enumerate the laws of reflections.**

Ans. i. The angle of incidence is always equal to the angle of reflection i.e.  $\angle i = \angle r$ .  
ii. The incidence ray, the normal at the point of incidence and the reflected ray all lie in the same plane.

**I. Why broad strapped bags are easier to carry than the thin strapped. Justify**

Ans. The area occupied by broad strapped bags is greater than the thin strapped due to which the pressure exerted by the broad one will be less than thin one and hence easier to carry.

**J. Friction is a necessary evil. Give reasons**

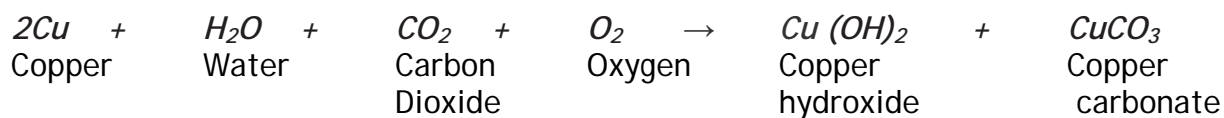
Ans. The force which always opposes the motion of one object over another object in contact with it is called friction. It is the friction between the sole of our shoes & ground that enable us to walk without slipping but due to friction between the surface of tyres & the surface of road, the tyres wear out gradually.

## **7.) Long Answer Questions: -**

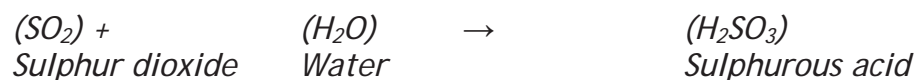
**Marks: 20.0**

- A. i. What will happen if a copper vessel is exposed to moist air for long? Also give the chemical equation.  
ii. A compound 'X' is formed when sulphur reacts with oxygen it dissolves in water to produce 'Y'. Name the compound 'X' and 'Y'.

Ans. i. When a copper vessel is exposed to moist air for long, it acquires a dull green coating. The green material is a mixture of copper hydroxide ( $\text{Cu}(\text{OH})_2$ ) and copper carbonate ( $\text{CuCO}_3$ ). The following is the reaction.



Ans ii. Sulphur reacts with oxygen to form sulphur dioxide. The sulphur dioxide dissolves in water to form sulphurous acid.



**B. a. What is advantage of using LED over bulb in testing the electrical conductivity of liquids?**

**b. Mention two applications of electroplating**

Ans a. When electric current flows through a bulb then due to heating effect of current the filament of the bulb gets heated up to a high temperature; it starts glowing. Now for a liquids having low electrical conductivity, the current flowing through the circuit is very weak due to which the filament does not get heated sufficiently & hence the bulb does not glow. Therefore LED is used in place of bulb because LED glows even when weak electric current flows in the circuit.

c. Applications of electroplating

Tin cans, used for storing food, are made by electroplating tin onto iron. Tin is less reactive than iron. Thus, food does not come into contact with iron and is protected from getting spoilt.

Cutlery and jewellery items are often silver plated - they have the appearance of silver but are much less expensive.



- C. a. Farmers in northern India grow legumes as fodder in one season and wheat in the next season. What is this practice known as?  
b. How does this practice help in the replenishment of soil?  
d. It was observed that the tadpoles are not growing into adult frogs in a village pond. What could be the reason for this?

Ans. a. The practice of growing crops in alternatively pattern is called as crop rotation.

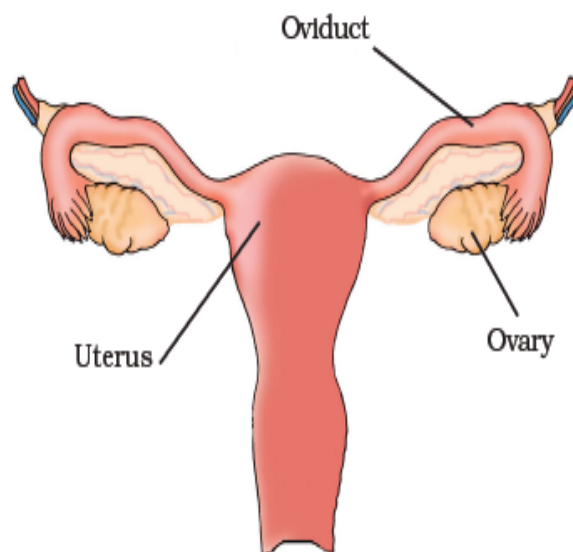
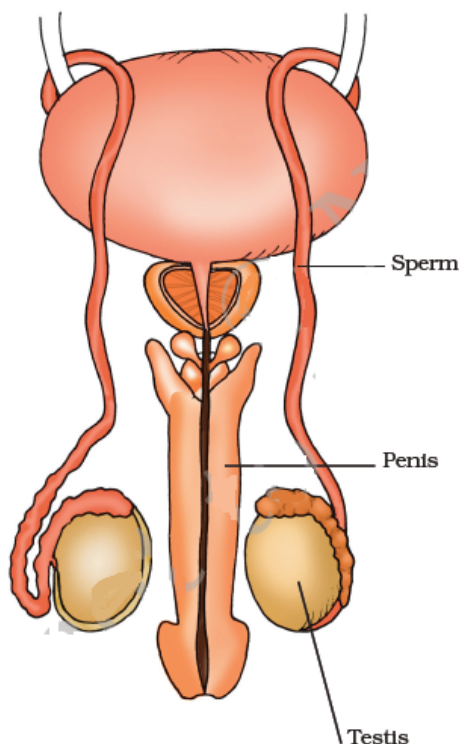
b. The *Rhizobium* bacteria living the root nodules of the leguminous plants fix the atmospheric nitrogen into usable form. The nutrients that became deprived from the soil because of the growth of wheat plant thus got replenished by the nitrogen fixing bacteria. This practice helps in balancing the amount of nutrients in the soil.

c. In a frog, growth is controlled by **thyroxine**, the hormone produced by **thyroid**. Thyroxine production requires the presence of iodine in water. If the water in which the tadpoles are growing does not contain sufficient iodine, the tadpoles cannot become adults.

D. Draw a well labeled diagram of -

a. Male reproductive system.

b. Female reproductive system.



Male reproductive system

Female reproductive system