INTERNATIONAL INDIAN SCHOOL DAMMAM
MIDDLE SECTION
MID TERM EXAMINATION WORKSHEET 2024-25

CLASS: VII **Subject: General Science**

L - NUTRITION IN PLANTS

I. Fill in the blanks:

a) _____ and _____are the end products of photosynthesis.

b) Tiny pores seen on the surface of leaves are called as_____.

c) Carbohydrates are made of _____, _____and_____.

d) _____ derive their food from the dead and decaying matter.

e) Two examples for useful fungi are_____and_____.

f) Pitcher like structure is the modified part of the_____.

g) Insectivorous plants feed on insects for fulfilling the requirement of_____.

II. Name the following:

1. Green coloured pigment in plants.
2. A bacterium that converts atmospheric Nitrogen into a soluble form.
3. Jelly like substance present in a cell.
4. Slimy, green patches formed in ponds and stagnant water bodies.
5. Limiting layer of a cell.
6. Mode of nutrition in mushrooms.
7. Stored form of carbohydrates.
8. The gas released during photosynthesis.
9. Nitrogenous substances which contain Nitrogen.
10. Two examples for animal parasite which suck human blood.

III. Answer the following:

1. What is symbiotic relationship?
2. What is the role of Rhizobium bacteria in leguminous plants?
3. What do you mean by saprotrophic nutrition?

IV. The questions below consist of an Assertion and a Reason. Use the following key to choose the appropriate answer.

(a) Both A and R are true and R is the correct explanation of A.
(b) Both A and R are true but R is not the correct explanation of A.
(c) A is true but R is false.
(d) A is false but R is true.

1. Assertion (A): Pitcher plants can trap insects and digest them.
Reason (R): Pitcher plants do not get the required Nitrogen from the soil.

2. Assertion (A): Bodies of living organisms are made by tiny units called cells.
Reason (R): All cells are enclosed by a cell wall.

Case Study

Food is essential for all living organisms. Plants are the only organisms that can prepare food for themselves by using some raw materials. It occurs in leaves. All the raw materials must reach there. It is a unique process on the earth. Solar energy is captured and stored in the plants during this process. The survival of almost all living organisms directly or indirectly depends upon the food made by the plants, in the absence of which, life would be impossible on the earth. In desert plants it is done by their green stems. Some plants with red, violet, or brown leaves also carry out this process.

Based on the above, answer the following

(1) Name the process by which plants prepare their food and represent it in the form of an equation.
(2) How solar energy is captured during this process?
(3) In cactus food making process takes place in green stems. Why?
(4) Plants with coloured leave also prepare their food. How?

L - NUTRITION IN ANIMALS

I. Choose the correct option:

1. Which of the following is not a ruminant?
   a) Giraffe b) Goat c) Cow d) Cat
2. The cream-coloured gland present below the stomach.
   a) Liver b) Pancreas c) Salivary gland d) Thyroid gland
3. Bile helps to digest.
   a) Proteins b) Carbohydrates c) Fats d) Sugars
4. At the end of digestion Carbohydrates are converted to:
   a) Fatty Acids b) Simple sugars c) Glycerol d) Amino Acids
5. The acid produced by the stomach which kills the germs that enter along with food
   a) Sulphuric acid b) HNO_3 c) HCl d) Acetic acid

II. Name the following:

1. The secretion of Liver.
2. The teeth used for chewing and grinding food.
3. Doctor who studied the functioning of the stomach.
4. The false feet of amoeba.
5. Longest part of the digestive system
6. The partially digested food that ruminants chew again.
7. Largest gland in human body.

III. Fill in the blanks:

1. ORS is given to those who suffer from_____.
2. Caecum is a part of the alimentary canal of_____.
3. Bile is stored in_____.
4. The stomach secretes_____,_____and_____which act on food.
5. Amoeba digests its food in_____.
6. The_____absorbs water and salts from the undigested waste.

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IV. Answer the following:

1. List the main steps of human nutrition.
2. Explain the role of mucous secreted by stomach.
3. What is egestion?
4. How can we prevent tooth decay?
5. What is diarrhoea?
6. Name the main parts of alimentary canal.
7. What are milk teeth?

V. The questions below consist of an Assertion and a Reason. Use the following key to choose the appropriate answer.

(a) Both A and R are true and R is the correct explanation of A.
(b) Both A and R are true but R is not the correct explanation of A.
(c) A is true but R is false.
(d) A is false but R is true

1. Assertion (A): The digestive tract and the associated glands together constitute the digestive system.

Reason (R): Digestive juices convert complex substances of food into simple ones.

2. Assertion- The inner lining of the stomach secretes mucus, HCl and digestive juices.

Reason- The stomach is thick-walled bag having S shape.

Case study

The food passes through a continuous canal which begins at the buccal cavity and ends at the anus. The canal can be divided into various compartments: (1) the buccal cavity, (2) foodpipe or oesophagus, (3) stomach, (4) small intestine, (5) large intestine ending in the rectum and (6) the anus. These parts together form the alimentary canal (digestive tract). The food components gradually get digested as food travels through the various compartments. The inner walls of the stomach and the small intestine, and the various glands associated with the canal such as salivary glands, the liver and the pancreas secrete digestive juices.

1. Which is the widest part of alimentary canal of the human digestive system that is used for churning of food in the body?
2. What is the function of acid in the stomach?
3. Define digestion.
4. The saliva breaks down the starch into _____.

L - HEAT

I. Fill in the blanks:

a) The process by which heat is transferred in solids is known as_____.
b) In India, temperature is measured in degree_____.
c) Land and sea breeze are caused because land_____and_____faster than the sea.
d) In liquids and gases, heat is transferred by the process of_____.
e) The range of a laboratory thermometer is generally from_____to_____.
f) The transfer of heat by_____does not require any medium.
g) _____ prevents mercury level from falling on its own, in the _____thermometer.
h) Dark surfaces_____heat while lighter surfaces_____ heat that falls on the surface.

i) Thermometer used to record the maximum and minimum temperature of the day _____.

II. Multiple Choice Questions:

1. The mode of heat transfer in liquids is _____.
   (Conduction, Convection, Radiation, Absorption)
2. Example of an insulator is _____. (Iron, Plastic, Aluminium, Copper)
3. Sea breeze blows during _____. (Summer, winter, day, night)
4. The normal temperature of the human body is _____.
   (35ºC, 37ºC, 39ºC, 42ºC)

III. Give reason:

1. Wearing more layers of clothing keeps us warmer during winters than one thick piece of clothing
2. Hollow bricks are used in constructing houses.
3. Stainless steel pans are provided with copper bottoms
4. In places with hot climate, it is advised that outer walls of houses be painted white.

IV. The questions below consist of an Assertion and a Reason. Use the following key to choose the appropriate answer.

(a) Both A and R are true and R is the correct explanation of A.
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1. Assertion (A) - We feel more comfortable in light coloured clothes in the summer.
   Reason (R) - Light colour absorb more heat than the dark colour.
2. Assertion (A) – When metallic objects are touched in winter, they give a colder sensation as compared to wooden objects.
   Reason (R) – Metals conduct heat faster than wood.

Case study

Heat is a form of energy. A reliable measure of the hotness of an object is its temperature. A thermometer is used to measure the temperature. Heat flows when there is a temperature difference between two bodies. There are three ways in which heat can flow from one object to another. Sea breezes and land breezes occur due to the convection of heat. Some materials do not allow heat to pass through them. Woolen clothes keep us warm in winter.

1. While constructing a house in a coastal area, in which direction should the windows preferably face and why?
2. Define convection of heat.
3. If a pan is removed from the fire, then why does it cool down?
4. In places of hot climate, it is advised that the outer walls of houses be painted white, explain.

L - Acids, Bases, and Salts

I. Choose the correct option.

1. Which of the following is an acid-base indicator?
   (a) Vinegar (b) Lime water (c) Turmeric (d) Baking soda

2. The colour change of blue litmus in acidic solution is___.
   (a) Blue (b) Purple (c) Red (d) Pink
3. Sodium bicarbonate is commonly called as_____.
   (a) Slaked lime (b) Lime water (c) Washing soda (d) Baking soda
4. The chemical name of calamine solution is_____.
   (a) Calcium carbonate (b) Zinc carbonate (c) Magnesium carbonate (d) Sodium carbonate
5. Which of the following can be used to neutralise an acid?
   (a) water (b) Sodium hydroxide (c) vinegar (d) common salt

II. Fill in the blanks

1. Litmus is extracted from _____.
2. China rose indicator turns _____solution to dark pink and _____ solution to green.
3. _____ acid is present in tamarind and grapes.
4. Ant's sting has _____acid and can be treated with _____ solution.
5. _____ can cause damage to historical monuments, buildings, plants, and animals.

III. Name the following

1. It gives a pink colour when the solution is basic but remains colourless when the solution is acidic.
2. The base used in window cleaner.
3. The chemical name of lime water.
4. Any two acids present in acid rain.
5. Colorless and synthetic indicator used in laboratory.
6. The base present in soap.
7. Substances which are neither acidic nor basic.
8. Three naturally occurring indicators.
9. Substances which are bitter in taste and feel soapy on touching.
10. Substances which are sour in taste.

IV. The questions below consist of an Assertion and a Reason. Use the following key to choose the appropriate answer.

(a) Both A and R are true and R is the correct explanation of A.
(b) Both A and R are true but R is not the correct explanation of A.
(c) A is true but R is false.
(d) A is false but R is true

1. Assertion (A): Blue litmus paper turns into red colour in acidic solution and red litmus paper turns blue in basic solution.
   Reason (R): The indicators change their colour when added to a solution containing an acidic or a basic substance.
2. Assertion (A): Ammonia is found in many household products, such as window cleaners.
   Reason (R): Ammonia is acidic in nature.

Case study

Acids and bases are chemically opposite substances. So, when an acid is mixed with a base, they neutralise (or cancel) the effect of each other. When an acid solution and a base solution are mixed in

suitable amounts, both the acidic nature of the acid and the basic nature of the base are destroyed. The resulting solution is neither acidic nor basic.

1. Name the reaction when an acid is mixed with base.
2. What does organic matter do in soil?
3. Why Calamine solution is applied on the skin when an ant bites?
4. Which of the following is not a characteristic of a neutralisation reaction?
   a) Temperature of the reaction mixture decreases.
   b) A lot of heat evolves.
   c) Along with salt, water is formed.
   d) Resulting salt can be acidic, basic or neutral.

L - PHYSICAL AND CHEMICAL CHANGES

I. Fill in the blanks

1. _____& _____are the two kinds of general changes that take place in our surroundings.
2. On burning Magnesium ribbon the ash formed is _____.
3. Souring of milk is a _____.
4. The turning of limewater milky is the standard test of _____.
5. When Magnesium oxide is dissolved in water _____is formed.
6. The reaction of Copper Sulphate with Iron produces _____.
7. _____absorbs ultra violet radiations and breakdown to Oxygen.

II. NAME THE FOLLOWING

1. The gas produced when baking soda is added to vinegar.
2. The natural protective shield to human beings against radiation.
3. The mixture of Chromium, Nickel, Manganese, Carbon and Iron.
4. Another name for chemical change.
5. Common name of Sodium Hydrogen Carbonate.
6. A change in which one or more new substances are formed.
7. A brownish film acquired on Iron when kept open.

III. MULTIPLE CHOICE QUESTIONS

1. The process of depositing a layer of zinc on Iron is called ____

   (Galvanisation, Rusting, Crystallisation)

2. All new substances are formed as a result of _____.

   (Physical change, Chemical change, None of these)

3. When CO_2 is passed through lime water _____is formed.

   (Calcium hydroxide, Calcium Carbonate, Sodium Carbonate)

4. The properties such as shape, size, colour and state of a substance are its _____.

(Physical, Chemical, None of these)

5. _____ change is irreversible and permanent.

(Physical, Chemical, Both)

6. _____ affects Iron articles and slowly destroys them.

(Galvanisation, Rusting, Burning)

7. The process of forming large crystals of pure substances from solution.

(Galvanisation, Rusting, Crystallisation)

IV. WRITE TRUE OR FALSE. IF FALSE CORRECT THE STATEMENT

1. Rust is iron.
2. Magnesium Hydroxide changes blue litmus red.
3. Iron Sulphate solution is blue in colour.
4. Explosion of firework is a physical change.
5. Crystallisation is a chemical change.

V. GIVE THE CHEMICAL NAME OF

1. Baking soda
2. Rust
3. Vinegar
4. Lime water

VI. GIVE THE CHEMICAL FORMULA OF

1. Calcium Carbonate
2. Magnesium Hydroxide
3. Iron Oxide

VII. COMPLETE THE EQUATIONS

1. Magnesium (Mg) + _____ → Magnesium Oxide
2. Magnesium Oxide (MgO) + water (H_2O) → _____
3. _____ + Iron → Iron Sulphate + Copper
4. Vinegar + Baking soda → _____ + other substances
5. Carbon dioxide (CO_2) + lime water $\{Ca(OH)_2\}$ → _____ + water
6. Iron (Fe) + _____ + water (H_2O) → rust (Iron Oxide Fe_2O_3)

IX. CLASSIFY AS PHYSICAL AND CHEMICAL CHANGES

1. Burning of candle
2. Folding of a cloth
3. Curdling of milk
4. Photosynthesis
5. Digestion of food
6. Stretching of rubber band
7. Rusting of iron
8. Rolling of chapatti
9. Moving of furniture
10. Writing on the black board

X. The questions below consist of an Assertion and a Reason. Use the following key to choose the appropriate answer.

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(b) Both A and R are true but R is not the correct explanation of A.
(c) A is true but R is false.

(d) A is false but R is true

1. Assertion (A): Formation of rust is a chemical change.
   Reason (R): For formation of rust, iron must be exposed to air and water.
2. Assertion (A): Explosion of a fire cracker is a physical change.
   Reason (R): A physical change is a reversible change.

CASE STUDY

A chemical change is a change that occurs when the internal structure of a material is altered to generate a new substance. For example, **chemical changes** can occur during the digestion of food, the burning of wood, the baking of a cake, the curdling of milk, the mixing of acid, the boiling of an egg, the **rusting of iron**, and so on. When iron is subjected to air, it develops a reddish-brown material called rust, and the process is known as rusting. Rusting is accelerated by the presence of moist air as well as seawater.

1. What are the factors essential for rusting?
2. What is galvanization?
3. Why does rusting takes place faster during rainy season?
4. How painting of an iron gate prevents it from rusting?