

BCM SCHOOL BASANT AVENUE, DUGRI ROAD LUDHIANA

CLASS: X

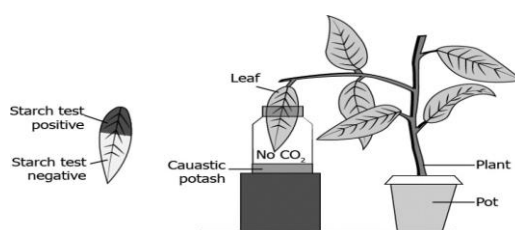
SUBJECT : SCIENCE

ASSIGNMENT

DATED:SEPT 09,2024 .

General Instructions: The Assignment has
THREE MCQ's
TWO Assertion reasoning questions
THREE Competency based questions and
One Case study based question.

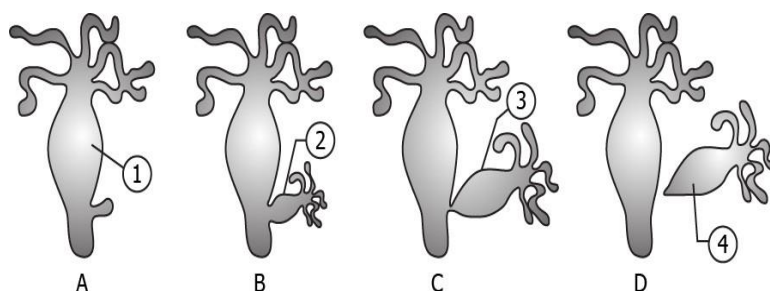
1. A student sets up an experiment to study the photosynthesis in plants. The student de-starched a potted plant by keeping it in a dark room for 3 days. Half of the portion of de- starched leaf was placed in a bottle containing caustic potash (absorbs CO₂) as shown.



The student then places the plant in light and tests the leaf after 5 hours for the presence of starch. The portions inside the bottle shows negative starch test by reflecting no change in colour when react with iodine, however, other upper portions of the leaf gave positive starch test showing blue-black colour with iodine. What can be evaluated from this experiment?

- a. carbon dioxide is directly linked with the colour of leaf
- b. carbon dioxide is necessary for preparing carbohydrate
- c. lack of carbon dioxide increases amount of starch in plant
- d. lack of carbon dioxide slows the process of photosynthesis

2



The model shows the process of budding in Hydra.

What is the likely purpose of this division in *Hydra*?

- a.to increase the body size
- b.to recover lost body parts
- c.to induce variation in body
- d. to develop new independent individual

3

A student adds an equal amount of copper sulphate solution in two beakers. He adds zinc in beaker P and silver in beaker Q. The student observes that the colour of the solution in beaker P changes while no change is observed in beaker Q. Which option arranges the metals in increasing order of reactivity?

- a.silver-zinc-copper
- b. zinc-copper- silver
- c. silver-copper-zinc
- d. copper-silver-zinc

4	<p>Assertion : CH_3COOH is used as vinegar in cooking and food preservatives.</p> <p>Reason: Strong acids are those acids which ionise almost completely in aqueous solution and hence produce a large amount of H^+ ions.</p>
5	<p>Assertion (A): A lead nitrate on thermal decomposition gives lead oxide, brown coloured nitrogen dioxide and oxygen gas.</p> <p>Reason (R): Lead nitrate reacts with potassium iodide to form yellow ppt. of lead iodide and the reaction is double displacement as well as precipitation reaction.</p>
6	<p>Iqbal treated a lustrous, divalent element M with sodium hydroxide. He observed the formation of bubbles in reaction mixture. He made the same observations when this element was treated with hydrochloric acid. Suggest how can he identify the produced gas. Write chemical equations for both the reactions.</p>
7	<p>A metal carbonate X on reacting with an acid gives a gas which when passed through a solution Y gives the carbonate back. On the other hand, a gas G that is obtained at anode during electrolysis of brine is passed on dry Y, it gives a compound Z, used for disinfecting drinking water. Identify X, Y, G and Z.</p>
8	<p>Many children in a remote mountain village complain of swollen necks, the number of children with swollen neck keeps increasing every month, a villager Tukaram who is superstitious thinks that village is cursed by a devil. Mukesh, another villager who thinks it as a disease suggests consultation with a doctor.</p> <ol style="list-style-type: none"> Do you agree with Tukaram or Mukesh and why? What is the reason behind the swollen necks of the young children in the village? Does the location of their villages have anything to do with the reason of the disease. Swollen necks are the symptom of which disease?
9	<ol style="list-style-type: none"> Make students stand in a line and whisper a complicated message in the ear of the first student. Let the process continue till the last student in the line. Ask the last student to call out the message. <p>The message sent through the "telephone" changes as it passes between the students because small mistakes by students accumulate, much like small <u>mutations (changes) in the DNA</u>. In evolution, after enough time passes, mistakes add up to adaptations and can create new species that don't resemble the originals. (Sourced from the above source.)</p> <ol style="list-style-type: none"> What causes changes in DNA during copying? What importance do variations serve? Are the traits in you are the same as your parents?

Syllabus for September Exams:

Chemistry: CH-1. Chemical Reactions and Equations

CH-2. Acids, Bases and Salts

CH-3. Metals and Non -Metals (till ionic compounds)

Biology: CH-5. Life Processes

CH-6. Control and Coordination

CH-7 How do organisms reproduce

Physics: CH-9. Light - Reflection & Refraction

CH-10. The Human Eye & The Colourful World