

BRAIN INTERNATIONAL SCHOOL

Science Assignment

Class: VIII

June'21

Chapter-3: Synthetic Fibres and Plastics

Read the following paragraph and answer the questions that follow:

A synthetic fibre is also a chain of small units joined together. Each small unit is actually a chemical substance. Many such small units combine to form a large single unit called a polymer. The word 'polymer' comes from two Greek words; poly meaning many and mer meaning part/unit. So, a polymer is made of many repeating units. Polymers occur in nature also. Cotton, for example, is a polymer called cellulose. Cellulose is made up of a large number of glucose units.

1. Mention two main uses of polyester fibre.
2. Write two advantages and two disadvantages of synthetic fibres.
3. Explain why the following are made of thermosetting plastics:
(a) Pressure cooker handle (b) Electric plugs/switches
4. Burning cotton or cotton clothes smells like burning paper, whereas burning wool/nylon smells like burning hair. Give reasons.
5. What is the difference between a linear polymer and a cross-linked polymer?
6. *In each of the following questions, a statement of Assertion is given by the corresponding statement of Reason. Of the statements, mark the correct answer as*
 - (a) If both Assertion and Reason are true and Reason is the correct explanation of Assertion.
 - (b) If both Assertion and Reason are true, but Reason is not the correct explanation of Assertion.
 - (c) If Assertion is true, but Reason is false.
 - (d) If Assertion is false, but Reason is true.
 - (e) If Assertion and Reason both are false.

(i) **Assertion (A):** Plastic containers are used to store many chemicals.
 Reason (R): Plastic is a non-reactive material.

 - **Answer the following questions:**
 1. Why is acrylic more popular than wool?

2. What is the difference between natural and synthetic fibres?
3. Write a few characteristics of synthetic fibres.
4. What is 4R principle?
5. What are biodegradable and non-biodegradable materials?

Chapter-4: Materials: Metals and Non-metals

Read the following paragraph and answer the questions that follow:

Some materials are hard, lustrous, malleable, ductile, sonorous and good conductors of heat and electricity. The materials which generally possess these properties are called metals. The examples of metals are iron, copper, aluminium, calcium, magnesium, etc. In contrast, materials like coal and sulphur are soft and dull in appearance. They break down into powdery mass on tapping with hammer. They are not sonorous and are poor conductors of heat and electricity. These materials are called non-metals.

Q1. What is meant by the reactivity series of metals?

Q2. What is malleability? Name the most malleable metal.

Q3. Can you store lemon pickle in an aluminium utensil? Explain.

Q4. What is an alloy? What are its advantages?

Q5. *In each of the following questions, a statement of Assertion is given by the corresponding statement of Reason. Of the statements, mark the correct answer as*

(a) If both Assertion and Reason are true and Reason is the correct explanation of Assertion.

(b) If both Assertion and Reason are true, but Reason is not the correct explanation of Assertion.

(c) If Assertion is true, but Reason is false.

(d) If Assertion is false, but Reason is true.

(e) If Assertion and Reason both are false.

(i) **Assertion (A):** Metals react with acids to give hydrogen gas.

Reason (R): Hydrogen gas can be tested as it burns with a 'pop' sound.

• **Answer the following questions:**

1. What do you mean by displacement reaction? Give one example of displacement reaction.
2. Have you ever seen a blacksmith beating an iron piece? Do you find a change in the shape of these pieces on beating? Would you expect a similar change in wood log on beating?

4. Explain that metals are good conductors of electricity with the help of an activity.

Chapter-8: Cell-Structure and Functions

Read the following paragraph and answer the questions that follow:

Different sets of organs perform the various functions you have listed. In this chapter, you shall learn about the basic structural unit of an organ, which is the cell. Cells may be compared to bricks. Bricks are assembled to make a building. Similarly, cells are assembled to make the body of every organism.

Q1. What would happen if there is no mitochondria in a cell?

Q2. Why is nucleus considered as brain of the cell?

Q3. Explain the various levels of organization in multicellular organisms.

Q4. Explain the functions of:

- (i) Golgi bodies
- (ii) Ribosomes
- (iii) Lysosomes

Q5. *In each of the following questions, a statement of Assertion is given by the corresponding statement of Reason. Of the statements, mark the correct answer as*

(a) If both Assertion and Reason are true and Reason is the correct explanation of Assertion.

(b) If both Assertion and Reason are true, but Reason is not the correct explanation of Assertion.

(c) If Assertion is true, but Reason is false.

(d) If Assertion is false, but Reason is true.

(e) If Assertion and Reason both are false.

- (i) **Assertion (A):** Amoeba is a microscopic organism.
Reason (R): Plant cells have plastids.

- **Answer the following questions:**