SET - A

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E 806

Summative Assessment - II Term, 2025 - 26

BASIC SCIENCE

Standard : VIII

Time : 2 hour
Total Score : 60

Instructions

- The first 15 minutes is cool-off time. Use this time to read and understand the questions carefully and plan your answers.
- The exam must be written in the following order: Physics, Chemistry, and Biology. Each subject is allotted 40 minutes.
- After completing each subject, the answer sheet must be handed over to the teacher.
- While writing answers, consider both score and time.
- For questions with choice, attempt only one of the given options.

Physics

Time : 40 minute
Total Score : 20

Section - A

Choose the correct answer for questions 1 & 2. Each question carries one score. (2 x 1 = 2)

Write the answer to all the questions.

1. Why does a diver at the bottom of a lake experience more pressure than that at the surface? (1)

   a. Because light decreases with depth.

   b. As he approaches the centre of the Earth.

   c. The fluid pressure increases with depth.

   d. He displaces the water.

2. **Statement :** An electroscope is a device for detecting the presence of electric charge in objects. (1)

   Reason : The leaves of a charged electroscope come closer after a long time.

   a. The statement and the reason are true and the reason explains the statement.

   b. The statement and the reason are true but the reason does not explain the statement.

   c. The statement is true but the reason is false.

   d. The statement is false but the reason is true.

Section - B

Answer questions 3 to 5 in more than one sentence. Questions 4 and 5 have choice. Each question carries 2 score. (3 X 2 = 6)

3. Fundamental units are the units of fundamental quantities.

   a) Write the time duration of a day in fundamental unit. (1)

   b) Write the characteristics of fundamental units. (1)

4 A. Observe the figures.

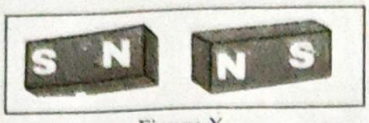


Figure X

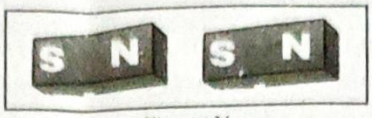


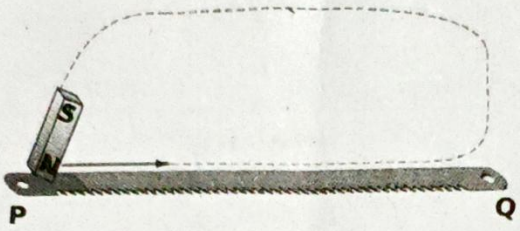
Figure Y

a) In which arrangement do the magnets repel each other? (1)

b) Explain how this property of magnetism has been utilised in maglev trains for reducing energy loss and noise pollution. (1)

OR

4 B. Figure illustrates a method to magnetise a hacksaw blade.



a) Write the poles at P and Q of the hacksaw blade. (1)

b) Even very small piece of this hacksaw blade will have two magnetic poles. Write down your response to this statement. (1)

5 A. Explain how lightning conductors protect buildings from lightning. (2)

OR

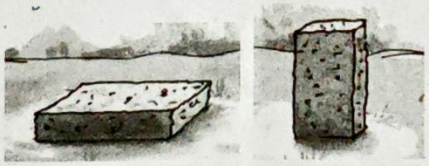
5 B. a) What are the precautions to be taken to protect ourselves from lightning? (1)

b) Prepare a note on the first aid to be given to a person struck by lightning, to present in your school assembly. (1)

Section - C

Answer questions 6 to 9. Each question carries 3 score. The eighth question has a choice.
(4 x 3 = 12)

6. The figure shows a concrete block of weight 100 N placed on sand in two different ways.



When the block is placed horizontally on sand, the area of the block in contact with the sand is 1 m^2. When placed vertically, its area of contact is 0.25 m^2. Which block exerted more pressure on the sand? Justify your answer. (3)

7. A car covered a distance of 90 m in 6 s, a bus covered a distance of 120 km in 2 hours. Which vehicle travelled faster? (3)

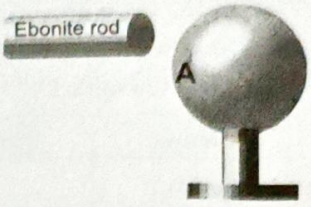
8 A. Static electricity is the accumulation of electric charges remaining in the same place without being able to flow.

a) Write down the methods that produce static electricity in objects? (1)

b) Explain how static electricity is used in photocopier machines. (2)

OR

8 B. A metal sphere fixed on an insulated stand is depicted.



a) An ebonite rod charged with wool is placed near the surface marked as A on the metal sphere. Draw the distribution of charge on the sphere. (2)

b) Suggest ways to retain the charge formed in the region A in the metal sphere for a longer period of time. (1)

9. Explain the reasons for the given statements

a) Rubber suckers stick to smooth surfaces (1)

b) A well-inflated balloon bursts when it is placed in sunlight (1)

c) Sailors are using magnetic compass. (1)

Chemistry

Time : 40 minute
Total Score : 20

Answer all questions from 1 to 2. 1 score each. **(2 x 1 = 2)**

1. Which substance in an aqueous solution can turn the colour of red litmus paper to blue? (1)

(Carbon dioxide, Sulphur dioxide, Magnesium oxide, Nitrogen dioxide)

2. Some characteristics of metals are given :

Characteristic	Metal
(i) Best conductor of electricity	(a) Lithium
(ii) Soft metal	(b) Gallium
(iii) Metal with low melting point	(c) Silver

Choose the correct options given below. (1)

A. (i) a (ii) b (iii) c

B. (i) a (ii) c (iii) b

C. (i) c (ii) a (iii) b

D. (i) b (ii) a (iii) c

Two questions from 3 to 8 have choice. Each question carries 2 scores. **(6 x 2 = 12)**

3. Write any two characteristics of non-metals. (2)

4 A. a) Write any one instance where the ductility of metals is utilized. (1)

b) What is the reason for using metals to make items like anklets (Chilanka) and cymbals (ilathalam)? (1)

OR

4 B. a) Give an example from daily life that utilises the high thermal conductivity of metals. (1)

b) Why aluminium foil is used to wrap tablets and food items ? (1)

5. Carbon dioxide reacts with water in the presence of sunlight to produce glucose and oxygen.
   a) What are the reactants in this chemical reaction? (1)
   b) What is the energy change in this chemical reaction? (1)

6. Write the gas produced when each of the given substances react with dilute hydrochloric acid.
   a) Zinc pieces (1)
   b) Sodium carbonate (1)

7. Complete the table by writing the symbol and Latin name of the given elements. (2)

Element	Symbol	Latin Name
Sodium	.....(a).....	.....(c).....
Iron	.....(b).....	.....(d).....

8 A. The pH values of some solutions are given below.

Solution (a) : 2
Solution (b) : 11
Solution (c) : 7
Solution (d) : 6

(a) Which solution among these has the highest acidic nature? (1)
(b) Identify which solution among these will not change the colour of any litmus paper. (1)

OR

8 B. Consider the given solutions and their pH values and answer the following questions.

Solution (1) : 10
Solution (2) : 7
Solution (3) : 8.5
Solution (4) : 5

(a) Which among these is the aqueous solution of a non-metal oxide? (1)
(b) Which solution among the given shows the highest basic nature? (1)

One question from 9 to 10 has choice. Each question carries 3 scores. (2 x 3 = 6)

9. Identify and write the chemical name of the compounds mentioned below based on the given hints.
   (a) The gas that turns lime water milky. (1)
   (b) The chemical substance known as Caustic Soda. (1)
   (c) The white precipitate formed when silver nitrate solution is added to sodium chloride solution. (1)

10 A. Write the reason for the following.
   (a) Sodium and Potassium are usually stored in kerosene. (1)
   (b) We use stainless steel vessels more often than iron vessels. (1)
   (c) Gold ornaments do not lose their lustre even when exposed to air. (1)

OR

10 B. (a) Suggest two methods to prevent corrosion of metals. (2)

(b) Iron objects usually rust in the presence of moisture and air. Write any other factor which accelerate rusting of iron. (1)

Biology

Time : 40 minute
Total Score : 20

Choices are given for questions 6, 7, 10.

Answer questions 1 and 2. Each question carries 1 score. **(2 x 1 = 2)**

1. Match the items in column A with column B and find out the correct one from the given options. (1)

A. Scientists	B. Contributions
P. Rudolf Virchow	i. Discovered cell
Q. Matthias Jakob Schleiden	ii. New cells are formed from pre-existing cell
R. Robert Hooke	iii. All plants are composed of cells
S. Theodor Schwann	iv. All animals are composed of cells

a) P-i, Q-ii, R-iii, S-iv b) P-ii, Q-iv, R-i, S-iii

c) P-ii, Q-iii, R-i, S-iv d) P-iii, Q-iv, R-ii, S-i

2. Read the given statements and choose the correct option. (1)

i. Meristematic tissues are composed of cells capable of continuous division.

ii. Meristem found at the tip of root and shoot is called intercalary meristem.

iii. Meristematic cells are responsible for plant growth.

a) i and ii are correct, iii is incorrect b) i and iii are correct, ii is incorrect

c) i correct, ii and iii are incorrect d) ii and iii are correct i is incorrect

Answer the questions 3 to 8. Each question carries 2 scores. **(6 x 2 = 12)**

3. '*Lichens are the perfect examples of symbiosis in the nature.*' Do you agree with this statement? Why? (2)

4. a) "Fungi are known as saprophytes." Analyze this statement and give reasons. (1)

b) "Fungi are considered both pathogenic and beneficial." Is this statement correct? Explain. (1)

5. Explain the change in the complexity of eukaryotic cells, when they evolved from prokaryotic cells. (2)

6 A. Wolffia, Azolla, and Salvinia have simple body structures. But Wolffia is included in a different family. Explain why? (2)

OR

6 B. *"Although 'racial differences' are evident among humans, all humans are included in the species sapiens."* Give reason. (2)

7 A. "Different types of microscopes are used to observe minute cells." Analyse the statement and answer the questions.

(a) A compound microscope can be used to see objects with greater clarity than a simple microscope. Why? (1)

(b) Compound microscope is not sufficient to understand the structure of cell organelles. Do you agree with the statement? Evaluate. (1)

OR

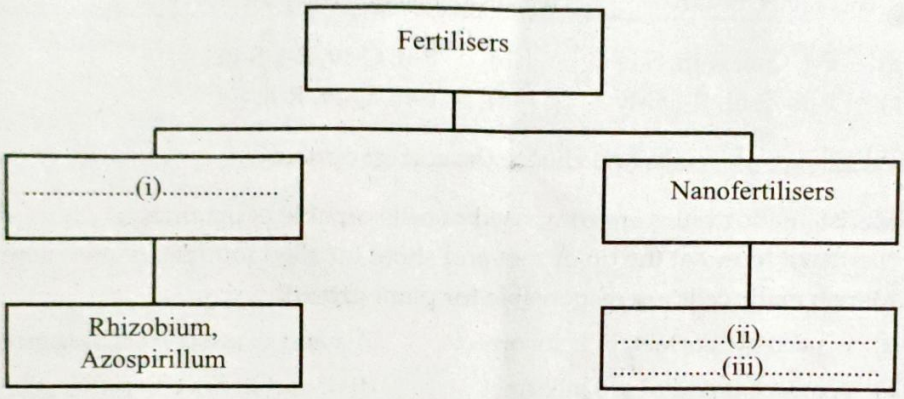
7 B. Analyse the given statement and answer the questions.

"The simple tissues and complex tissues of plants are formed from a special kind of tissue"

(a) Name the special kind of cells that can develop into different plant tissues. (1)

(b) Write the features of those special cells referred in the above statement. (1)

8.



Observe the illustration and answer the questions.

(a) Identify (i) and explain the reason why they are known so ? (1)

(b) Identify (ii) and (iii) (1)

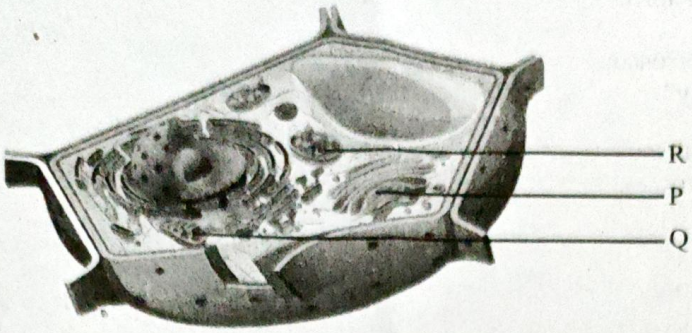
Answer the questions 9 and 10. Each question carries 3 score. **(2 x 3 = 6)**

9. Answer the given questions regarding the classification levels of tiger.

(a) Name the phylum in which tigers and lions are included? Why both of them belong to that phylum? (1)

(b) Leopard and tiger belong to the genus Panthera. But they do not belong to the same species. Why? (2)

10 A. `Observe the given diagram of a plant cell. Answer the questions.



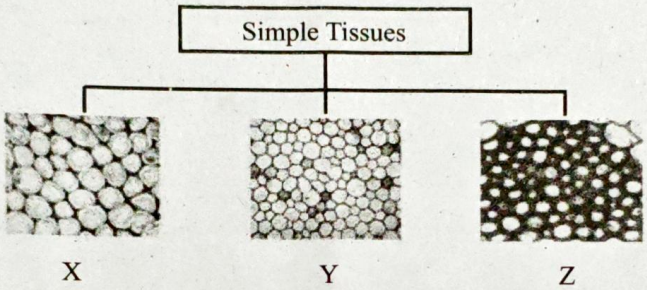
(a) Identify 'P' and 'Q'. (1)

(b) What is the importance of the part labelled as 'Q'? (1)

(c) Why cell membrane is known as selectively permeable membrane? (1)

OR

10 B. Observe the given illustration and answer the questions.



(a) Identify 'X' and 'Y'. Write their functions. (1)

(b) 'Z' gives strength and support to the plant parts. What characteristics of this tissue help with that? (1)

(c) Which are the complex tissues in plants? How do complex tissues differ from simple tissues? (1)