

**Science**

**Writing Time : 2 Hours**  
**Total Marks : 100**

**READ THE FOLLOWING DIRECTIONS CAREFULLY:**

1. In this **booklet**, you will find 25 questions in Section A and 5 questions in Section B. You must answer **all** the questions. Each question in Section A is worth **2 marks**.
2. All answers for Section 'A' and 'B' **must** be written in the answer sheets provided by the school.
3. Do **not** start writing the answers to questions until you are given permission to do so.
4. You will have 2 hours in which to answer all the questions.
5. Once the examination begins, you will not be allowed to ask questions, speak with others or move around.
6. If you finish before the time is over, close the answer sheets, and sit quietly. You are allowed to leave the examination room **ONLY** half-an-hour before the completion of the stipulated time of the paper.

***DO NOT forget to write your name and class/section.***

**IF YOU HAVE ANY QUESTIONS, ASK THEM NOW!**

**TURN THE PAGE**

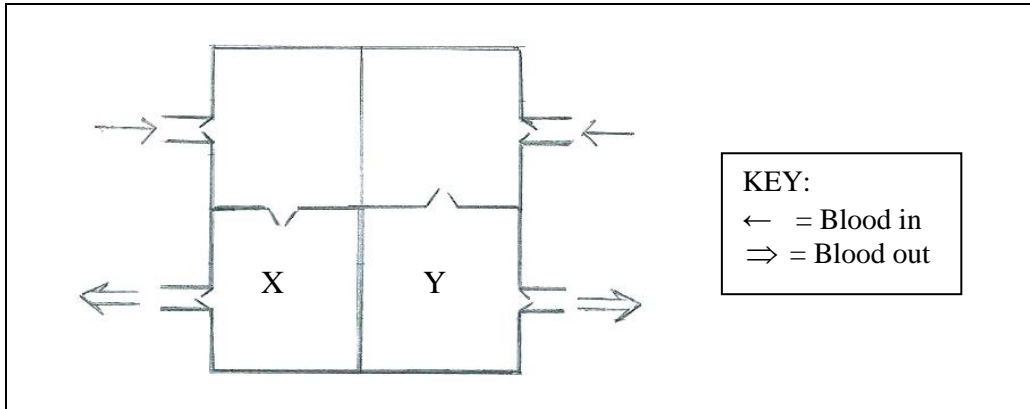
(15 Minutes is to be allowed for reading as well as for teachers on duty to explain the instructions)

**SECTION A**  
**25 Questions – 50 Marks**  
**Answer ALL questions**

*Direction: Each question in this section is followed by four possible choices of answers.  
Choose the most correct answer and write it down in the answer sheets provided by the school.*

1. What characteristics do reptiles share?
  - A They have gills.
  - B They have scales.
  - C They have moist skin.
  - D They have warm blood.
  
2. Which of the following is the symbol of an element?
  - A ZnO
  - B H<sub>2</sub>O
  - C CO
  - D O
  
3. The method used to separate grains from stalk is
  - A sieving.
  - B threshing.
  - C winnowing.
  - D hand-picking.
  
4. What activity of mankind can contribute in creating new habitats?
  - A reforestation
  - B afforestation
  - C creating parks and reserves
  - D selective harvesting of trees
  
5. Why is the leaf boiled in spirit during starch test?
  - A To remove the starch.
  - B To make the leaf soft.
  - C To make the leaf hard.
  - D To remove chlorophyll.

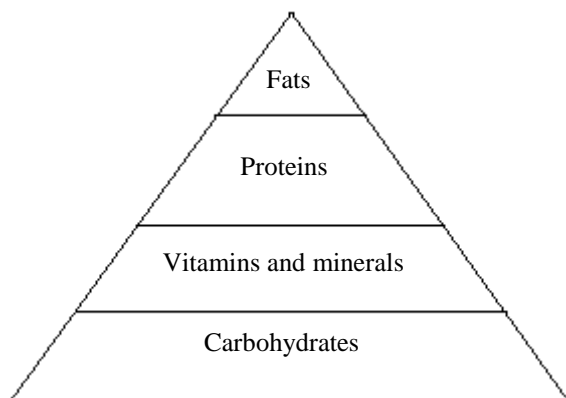
6. The picture given below is the diagrammatic representation of a human heart with different types of blood labelled as X and Y.



Which of the following statements about blood is *true*?

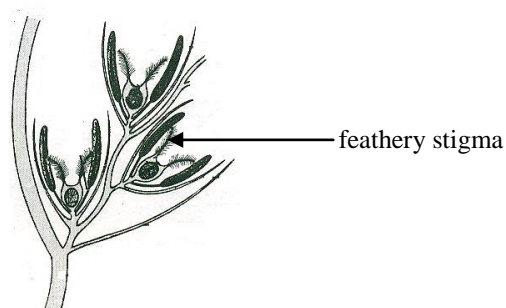
- A Blood X has oxygen and Y has carbon dioxide.
  - B Blood X has carbon dioxide and Y has oxygen.
  - C Blood X and Y both have carbon dioxide only.
  - D Blood X and Y both have oxygen only.
7. Read the following.
- Animals have hair on their bodies.  
 They give birth and feed their young ones with milk.
- The characteristics given above best describe
- A a fish.
  - B a bird.
  - C a mammal.
  - D an amphibian.
8. A group of students are to develop an eco-pond in their school by planting some aquatic plants. They must choose plants with
- A small leaves and few branches.
  - B flat leaves with air spaces.
  - C broad flattened leaves.
  - D aerial roots.

9. Tashi has been standing with a bucket of water for an hour. The work done by Tashi is zero because he
- A has not applied force.
  - B has not moved over a distance.
  - C is carrying a light bucket of water.
  - D is carrying a heavy bucket of water.
10. Study the food pyramid given below and answer the question that follows.



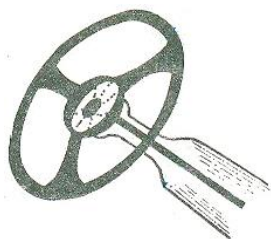
- Why does the food pyramid suggest eating small amounts of fats?
- A They make us healthy.
  - B They are protective food.
  - C They contain lots of vitamins.
  - D They contain more energy than carbohydrates.
11. Which of the following is a translucent object?
- A coloured glass
  - B clean water
  - C wood
  - D stone
12. When a stretched rubber band is released, it moves away from you. The form of energy present in the flying rubber band is
- A radiant energy.
  - B kinetic energy.
  - C potential energy.
  - D chemical energy.

13. A group of students observed the following flower while visiting the fields of a farmer in their village.



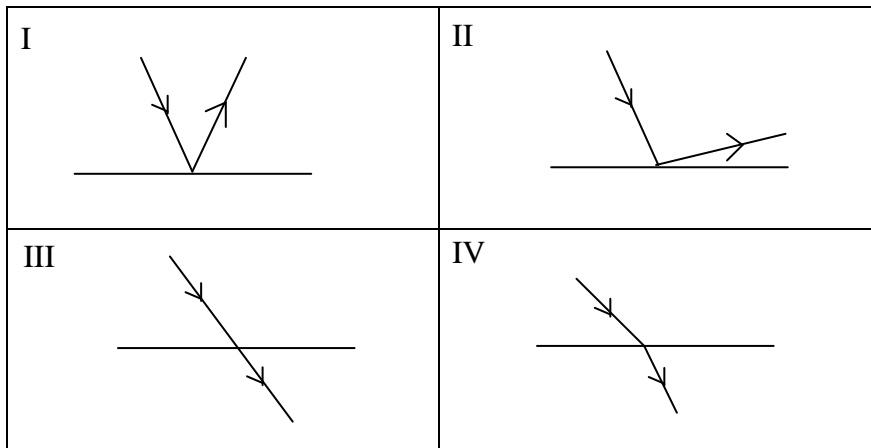
- The flower given above is pollinated by
- A animals.
  - B insects.
  - C water.
  - D wind.
14. Which water sample given below will form the least amount of lather?
- A tap water
  - B rain water
  - C boiled water
  - D distilled water
15. In a parallel circuit, the voltage across all electrical appliances will be
- A low.
  - B high.
  - C same.
  - D different.
16. During polar days,
- A the sun rises every day.
  - B the sun does not set for a whole year.
  - C there is no sunlight for more than 24 hours.
  - D there is continuous sunlight for more than 24 hours.

17. Which of the following is shown in the diagram given below?



- A lever  
B pulley  
C inclined plane  
D wheel and axle
18. Potential energy depends on the
- A shape and size of an object.  
B length and breadth of an object.  
C weight and position of an object.  
D colour and chemical properties of an object.
19. It is important to have a good body posture while lifting or carrying an object because
- A it makes our work easier.  
B it makes our body stronger.  
C it makes our body muscular.  
D work can be completed faster.
20. A potted plant kept in a dark room was watered regularly. The plant did not grow well due to lack of
- A air.  
B light.  
C space.  
D water.
21. When too many electrical appliances are connected to a single electrical socket, the appliances
- A receive high voltage from the source.  
B consume less electrical energy.  
C work more efficiently.  
D may cause fire.

22. Which of the figures given below is an example of refraction?



- A I
- B II
- C III
- D IV

23. What will happen, if sugar is added to a glass of milk?

- A Sugar will dissolve.
- B Sugar will float on the milk.
- C Sugar will sink to the bottom.
- D Sugar will change the colour of the milk.

24. When the altitude above sea-level increases, the

- A mass of an object increases.
- B mass of an object decreases.
- C weight of an object decreases.
- D weight of an object remains same.

25. The degree of alkalinity or acidity can be tested by using

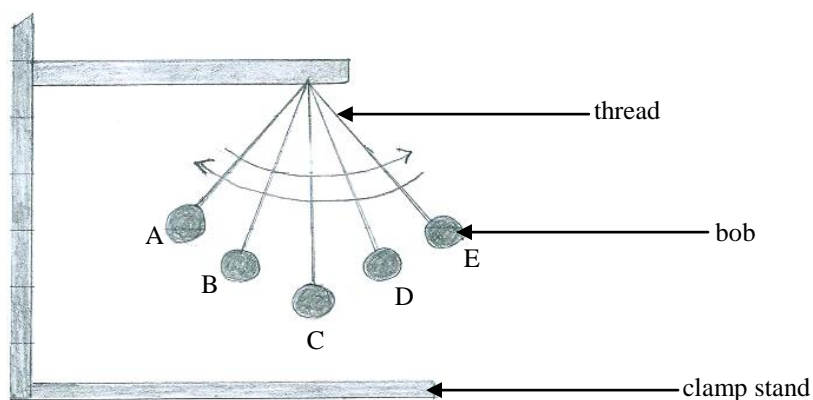
- A methyl orange.
- B blue litmus paper.
- C red litmus paper.
- D pH indicator.

**SECTION B**  
**5 Questions – 50 Marks**  
**Answer ALL questions**

*Direction: Answer the questions given below as directed. All answers must be written in the answer sheets provided by the school. The intended marks for each question is given in brackets [ ].*

**Question 26.**

- (a) State whether the following sentences are **TRUE** or **FALSE**. [5]
- (i) The image that you see in the mirror is the refraction of your body.
  - (ii) The nutrient which provides green colour to plant is potassium.
  - (iii) The North Pole lies in the ice covered continent of Antarctica.
  - (iv) During a chemical change, new substances are produced.
  - (v) The saliva is acidic in nature.
- (b) Study the diagram given below and answer the questions that follow.



- (i) What type of energy does the bob possess at position B? [½]
  - (ii) Mention the energy change of the swinging bob from position A to E. [1½]
- (c) Answer the following questions:
- (i) Hard water is not suitable for domestic purposes. State **TWO** reasons. [2]
  - (ii) Why is the use of a separating funnel preferred over decantation to separate immiscible liquids? [1]

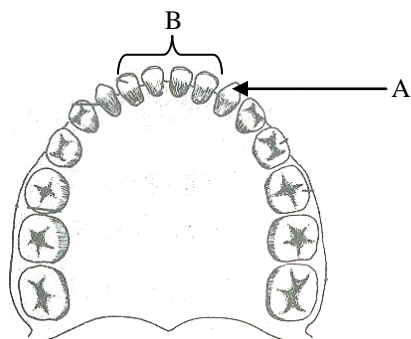


**Question 27.**

(a) Explain the following terms:

- (i) Distillation
- (ii) Dispersal
- (iii) Solution
- (iv) Streamlined
- (v) Vacuum

(b) Study the diagram given below and answer the questions that follow:



- (i) Name the parts labelled B. [½]
- (ii) Mention the function of the part labelled B. [½]
- (iii) Name **TWO** animals which have well developed tooth A. [1]

(c) How do birds differ from amphibians? State **THREE** differences. [3]

**Question 28.**

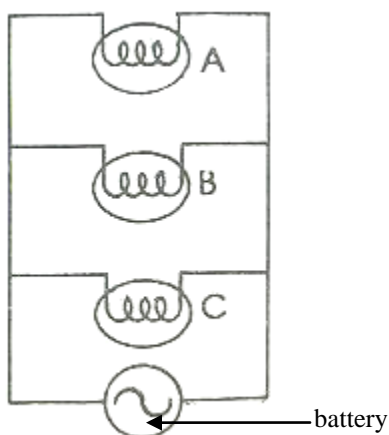
(a) Fill in the blanks. [5]

- (i) The number of organisms in each level of a food chain is called .....
- (ii) When the liquid is dense, the object will .....
- (iii) After fertilization, ovules develop into .....
- (iv) The type of plants which grow on rocks are known as .....
- (v) When there is no sunlight for more than 24 hours, it is called .....

(b) Answer the following questions: [4]

- (i) What does a latitude determine?
- (ii) What do you mean by an indicator?
- (iii) Mention **one** way to prevent skin diseases.
- (iv) Is evaporation one of the important processes in nature? Support your answer with **ONE** reason.

- (c) Three bulbs are connected in parallel to a battery and all are lit as shown in the diagram given below. If bulb C is removed, what will happen to bulbs A and B?



**Question 29**

- (a) Match column I with column II.

[5]

Column I	Column II
i. Magnetic lines of force ii. Miscible iii. Scream iv. New substances v. Reforestation	a. pitch b. plantation of tree saplings c. south pole to north pole d. north pole to south pole e. milk and water f. mixture of sodium hydroxide and copper sulphate.

- (b) Answer the following questions:

[4]

- (i) What is systemic circulation?
- (ii) A camel has a big hump to store fat for energy. Give any **TWO** other features that help them to survive in the desert.
- (iii) An object thrown in the air falls back to the ground. If you throw the same object in a vacuum, will it fall? Why?
- (iv) Describe **TWO** psychomotor skills of a child between the age of 1 – 3 years.

- (c) ‘A bar magnet is a permanent magnet and an electromagnet is a temporary magnet.’ In your opinion, which would be the best magnet to be used in an electric bell? Why?

[1]

**Question 30**

(a) Copy and complete the table given below:

Name of the element	Symbol
(i) Mercury	
(ii) Magnesium	
(iii) Silver	
(iv) Helium	

- (b) Draw the positions of the earth, moon and sun at the time of the lunar eclipse. [2]
- (c) Answer the following questions:
- (i) Birds have wings and feathers. Write **ONE** function each of feathers and wings. [1]
  - (ii) Dawa is in need of a strong electromagnet for his toy. Suggest **TWO** ways to make an electromagnet strong. [1]
  - (iii) What makes the leaf green in colour? [1]
  - (iv) How does a pencil and a coin appear when put in a jar of water? Why? [2]
  - (v) How is the mass of an object related to the weight of an object? [1]