



INDIAN SCHOOL AL WADI AL KABIR

FINAL EXAMINATION (2023-24)

CLASS: VII

Sub: SCIENCE

MAX.MARKS: 80

DATE: 07/03/2024

Set -I

TIME: 3 HOURS

General Instructions:

- i. All questions are compulsory. Marks are indicated against each section.
- ii. The question paper comprises of 9 pages and 39 questions in 5 sections A, B, C, D and E.
- iii. Q 1 to Q 16 in **section A** are MCQ type and carry ONE mark each. Write the correct answer along with the option in the answer script.
- iv. Q 17 to Q 20 in **section A** are Assertion and Reason type and carry ONE mark each.
- v. Q 21 to Q 26 in **section B** are short Answer Type Questions and carry TWO marks each.
- vi. Q 27 TO Q 33 in **section C** are Short Answer Type Questions and carry THREE marks each.
- vii. Q 34 TO Q 36 in **section D** are Long Answer Type Questions and carry FIVE marks each.
- viii. Q 37 TO Q 39 in **section E** are Case study/paragraph Questions and carry FOUR marks each.
- ix. Write the same question number as given in the question paper.
- x. Whitener should not be used in the answer script.
- xi. Diagrams should be drawn using a pencil.

SECTION A (1×20=20)

1. The process of depositing a layer of Zinc on Iron is called _____
 - a) Crystallisation
 - b) Galvanisation
 - c) Rusting
 - d) Electrolysis
2. Which of the following is not a chemical change?
 - a) Melting of ice
 - b) Digestion of food
 - c) Photosynthesis
 - d) Burning of coal
3. Chethana revisited a historical monument after 10 years. She noticed that the white monument had turned yellowish. Which event is most likely to have caused the change in colour of the monument?
 - a) Flood
 - b) Draught
 - c) Acid rain
 - d) Thunderstorm

4. Which of the following substances are basic?
 - a) Curd and soap
 - b) Window cleaner and Soap
 - c) Tamarind and the window cleaner
 - d) Curd and Tamarind

5. The type of cells, present in the blood, whose main function is to fight against diseases by destroying harmful bacteria and other foreign materials.
 - a) RBC
 - b) WBC
 - c) Platelets
 - d) Blood plasma

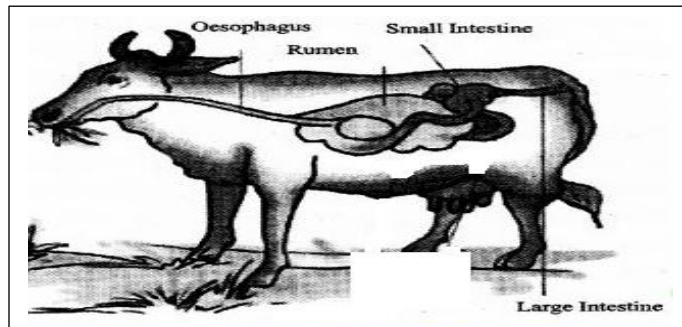
6. The device that is used by doctors to amplify the sound of the heart.
 - a) Thermometer
 - b) Glucometer
 - c) Otoscope
 - d) Stethoscope

7. Which of these animals breathes through its moist skin?
 - a) Cockroach and fish
 - b) Fish and snake
 - c) Earthworm and frog
 - d) Fish and lizard

8. Breathing rate in adult human beings in normal conditions is:
 - a) 12-15 times in a minute
 - b) 15-18 times in a minute
 - c) 18-22 times in a minute
 - d) 22-25 times in a minute

9. Which of the following pairs of teeth differ in structure but are similar in function?
 - a) Incisors and molars
 - b) Premolars and canines
 - c) Molars and premolars
 - d) Canines and incisors

10. Which of the following labelled parts stores cud in ruminants?
 - a) Oesophagus
 - b) Rumen
 - c) Small intestine
 - d) Large intestine







11. Rohan is observing his image in a plane mirror. The distance between the mirror and his image is 4 m. If he moves 1 m towards the mirror, then the distance between Rohan and his image will be:

- a) 3 m
- b) 5 m
- c) 6 m
- d) 8 m

12. The adjustment or changes in behaviour, and structure of an organism to suit to an environment is called:

- a) Habitat
- b) Adaptation
- c) Respiration
- d) Transpiration

13. The picture shows different types of seeds and their features, Which seed is most likely to be dispersed by water?

Type of seed	Picture	Features
Seed 1		very light weight, has feathery hairs
Seed 2		hard, has tiny hooks
Seed 3		hard, has spikes
Seed 4		light weight, hard and hollow

- a) Seed 3
- b) Seed 1
- c) Seed 4
- d) Seed 2

14. Which of the following statements is/are true for sexual reproduction in plants?
- (i) Young plants are obtained from seeds.
 - (ii) Fertilisation can occur only after pollination.
 - (iii) Two plants are always essential.
 - (iv) Only insects are agents of pollination.
- a) (i) and (iii)
 - b) (i) only
 - c) (i) and (ii)
 - d) (i) and (iv)
15. Humidity refers to:
- a) Amount of ice crystals in the atmosphere.
 - b) Amount of water vapour in the atmosphere.
 - c) Amount of dust in the atmosphere.
 - d) Amount of Nitrogen in the atmosphere.
16. Razia conducted an experiment in the field related to the rate of percolation. She observed that it took 40 minutes for 200 mL of water to percolate through the soil sample. Calculate the rate of percolation.
- a) 5 mL/min
 - b) 10 mL/min
 - c) 2.5 mL/min
 - d) 0.05 mL/min

For the following questions, two statements are given- one labelled Assertion (A) and the other labelled Reason (R). Select the correct answer to these questions from the codes (i), (ii), (iii), and (iv) as given below

- i) Both A and R are true and R is the correct explanation of the assertion.*
- ii) Both A and R are true but R is not the correct explanation of the assertion.*
- iii) A is true but R is false.*
- iv) A is false but R is true.*

17. **Assertion (A):** During physical exercise, the breathing rate of a person increases.
Reason (R): Our body requires more oxygen during physical activity.
18. **Assertion (A):** A leaf insect looks like leaves and polar bears have white fur.
Reason (R): The leaf insect and polar bears use their bodies to attack enemies.
19. **Assertion (A):** Several droplets of water are seen on the margins of the leaves of roses in the morning.
Reason (R): We give water to the rose plants and some water falls onto the leaves.
20. **Assertion (A):** Tearing paper into small pieces is a chemical change.
Reason (R): It is not possible to rejoin small paper bits to get back the original paper.

SECTION B (2×6=12)

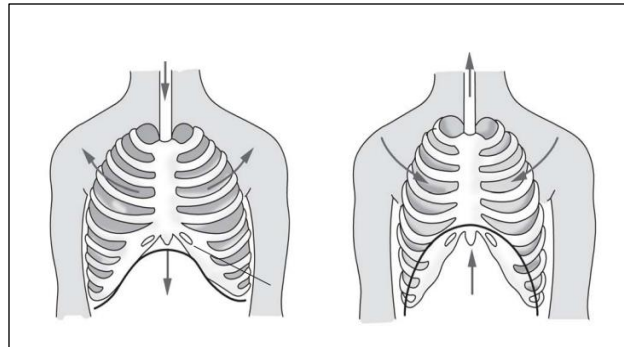
21. a) Explain why rusting of iron objects is faster in coastal areas than in deserts.
- b) Crystallisation is an example of a physical change. Justify the statement.
22. a) Why should laboratory acids and bases be handled carefully?
- b) Is distilled water acidic, basic, or neutral? Explain how would you verify it.
23. a) Explain the process of respiration:
- (i) in the leaves of a plant.
- (ii) in the roots of a plant.
- b) Why do we get muscle cramps after heavy exercise?
24. a) i) What are villi?
- ii) Mention the function of villi in the process of digestion.
- b) What is the role of pseudopodium in the nutrition of amoeba?
25. Draw a neat labelled diagram of the human excretory system.
26. a) What happens to the breathing rate when a person is tired, bored, drowsy, or sleepy?
Explain how does yawning improve this situation.
- b) List any two similarities between aerobic and anaerobic respiration.

SECTION C (3×7=21)

27. a) State any two characteristics of the image formed by a plane mirror.
- b) What do you mean by 'angle of incidence' and 'angle of reflection' of a ray of light on a plane mirror?
- c) Why are convex mirrors used as side-view mirrors in scooters?
28. a) i) Explain what happens when an iron nail is dipped in a copper sulphate solution.
- ii) Write down the word equation for the above reaction.
- b) The ozone layer acts as a natural shield against ultraviolet radiation. Explain.

29. a) Why do we often sneeze when we inhale a lot of dust-laden air?

b) Observe the figure given below and answer the following question.



Explain the changes that happen to the diaphragm and ribs during inhalation and exhalation.

30. a) 700 g of soil is dried completely under the sun. The mass of dried soil is 632 g.
Calculate the moisture content in the given sample of soil.

b) Sketch the soil profile and label the various layers.

31. a) A Toucan has a long and large sharp beak. How does this adaptation help the bird in its survival on trees?

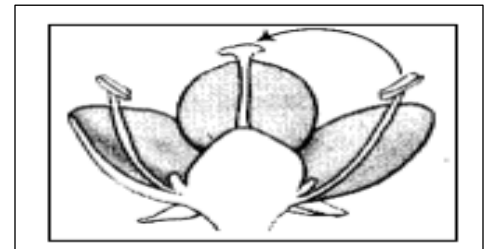
b) Why is it difficult to predict the weather of a place while it is easy to predict its climate?

c) Explain the adaptations that help in the protection of the Red-eyed frog.

32. a) Observe the figure given below and answer the questions that follow:

i) Identify the type of pollination shown alongside.

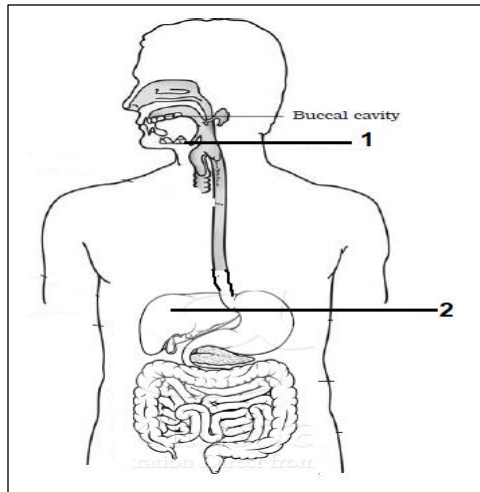
ii) Explain the type of pollination shown alongside.



b) Draw and label the male reproductive part of a flower.

c) What are the advantages of vegetative propagation?

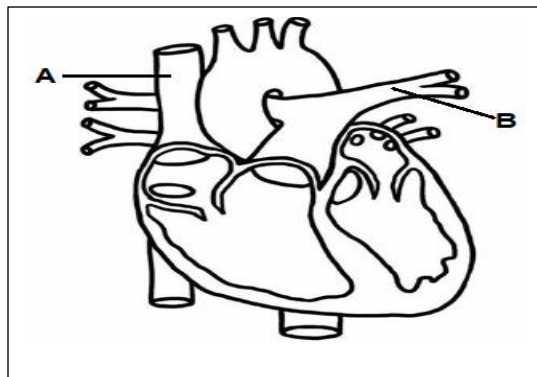
33. The parts of the human digestive system are indicated below using numbers:



- a) Name the glands marked as 1 and 2 and explain their functions.
- b) What are the simple forms of carbohydrates and proteins obtained after digestion?

SECTION D (5×3=15)

34. a) Write down any two differences between concave and convex lenses.
 - b) What is the nature of an image formed by a concave mirror:
 - i)) If the object is placed very near to the mirror.
 - ii) If the object is at a distance from the mirror.
 - c) Write an experiment to show that sunlight consists of seven colours.
35. a) Mention any two distinguishing characteristics between arteries and veins.
 - b) i) What are vascular tissues?
 - ii) Name the two vascular tissues in plants.
 - c) Identify the labelled parts A and B marked in the given diagram of the human heart.



36. a) What is meant by the term fertilisation?

b) Seed dispersal is beneficial to the plants. Write any two reasons to justify the statement.

c) How does asexual reproduction through fragmentation occur, explain with the help of a neat diagram.

SECTION E (4×3=12)

37.

Rahul went to a party and he ate too much fast food at the party and after returning home he had a severe stomachache. His parents were worried about his condition. They went to a doctor. The doctor told them not to get worried as it was due to indigestion of food and he also explained that a reaction between an acid and a base is known as a neutralisation reaction. Our stomach contains hydrochloric acid that helps us to digest food, but too much acid in the stomach causes indigestion. Sometimes indigestion is painful, so to get relief from indigestion, we take an antacid tablet that contains Magnesium hydroxide. It neutralises the effect of excessive acid in our stomach.

(i) Name the acid present in our stomach that helps in digestion

(ii) What do you mean by neutralisation reaction?

(iii) Explain why an antacid tablet is taken when you suffer from acidity.

38.

John, Rashida, and Radha went to Leeladhar Dada of Sohagpur in Madhya Pradesh. Leeladhar Dada was preparing the soil to make items like surahi, matki, kalla (earthen frying pan), etc. He explained to them that soil is essential for the existence of life on Earth but nowadays soil erosion and soil pollution are critical issues threatening our environment. The removal of fertile topsoil from land by wind or water is called soil erosion. Human activities often accelerate erosion.

Concurrently, waste products from industries that contain chemicals, excessive use of fertilisers, pesticides, and insecticides, untreated sewage water, and non-biodegradable waste like polythene plastic, and metal can cause soil pollution, affect plant growth, and pose health risks. The protection of soil against erosion and pollution is called soil conservation. Soil conservation practices such as terrace farming, crop rotation, building dams and barriers, and afforestation are essential to mitigate erosion and pollution, preserving soil health for future generations.

(i) Define soil erosion.

(ii) Write any two significant sources contributing to soil pollution.

(iii) Mention four methods to conserve soil.

39.

The polar regions present an extreme climate. These regions are covered with snow and it is very cold for most of the year. For six months the sun does not set at the poles while for the other six months, the sun does not rise. In winter, the temperature can be as low as -37°C .

Animals like polar bears and penguins have adapted to these severe conditions. A well-known animal living in the polar regions is the penguin. It has thick layers of stiff and densely packed feathers that block the cold Antarctic waters from reaching its skin. A thick layer of blubber under feathers keeps it warm. Penguins also huddle together to keep themselves warm. Penguins are good swimmers. Their bodies are streamlined and their feet have webs, making them good swimmers. Birds living in polar regions must remain warm to survive. They migrate to warmer regions when winter sets in and come back after the winter is over. The seasonal journeys from colder to warmer places to cope with cold and shortage of food supply during winter months is called migration.

- (i) What do you understand by migration?
 - (ii) What are the key characteristics and environmental factors that explain the climatic conditions of polar regions?
 - (iii) Describe four adaptive features of Penguins.
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