



BK BIRLA CENTRE FOR EDUCATION
SARALA BIRLA GROUP OF SCHOOLS
SENIOR SECONDARY CO-ED DAY CUM BOYS' RESIDENTIAL SCHOOL
ANNUAL EXAMINATION 2024-25
SCIENCE



Class: VII
Date: 10/03/25
Name:

Duration: 3 Hrs
Max. Marks: 80
Exam no:

General Instructions:

- i. This question paper consists of 39 questions in 5 sections.
- ii. All questions are compulsory. However, an internal choice is provided in some questions. A student is expected to attempt only one of these questions.
- iii. Section A consists of 20 objective type questions carrying 1 mark each.
- iv. Section B consists of 6 Very Short questions carrying 02 marks each. Answers to these questions should be in the range of 30 to 50 words.
- v. Section C consists of 7 Short Answer type questions carrying 03 marks each. Answers to these questions should be in the range of 50 to 80 words.
- vi. Section D consists of 3 Long Answer type questions carrying 05 marks each. Answer to these questions should be in the range of 80 to 120 words.
- vii. Section E consists of 3 source-based/case-based units of assessment of 04 marks each with sub-parts

Section-A

Select and write the most appropriate option out of the four options given for each of the questions 1 - 20. There is no negative mark for incorrect response.

1. What is the charge on protons? 1
(a) Negative (b) Positive (c) Neutral (d) None of these

2. What is the chemical symbol of mercury? 1
(a) Me (b) Hm (c) Hg (d) My

3. The reaction between iron and copper sulphate is a type of: 1
(a) Decomposition reaction (b) Displacement reaction
(c) Combination reaction (d) None of these

4. What is depositing a layer of zinc on iron called? 1
(a) Sublimation (b) Tinning (c) Galvanisation (d) Crystallisation
5. The boiling point of water is _____. 1
(a) 120°C (b) 80°C (c) 100°C (d) 150°C
6. The process of removal of salt from sea water is called _____. 1
(a) Desalination (b) Salinity (c) Condensation (d) Precipitation
7. PVC stands for: 1
(a) Poly vermicast (b) Polyvinyl chloride (c) Poly vermicomposting (d) None of these
8. Which device measures the speed of the vehicles? 1
(a) Odometer (b) Speedometer (c) Ammeter (d) None of these
9. A funnel-shaped wind that spins with very high speed : 1
(a)Tornado (b) cyclone (c) lightning (d) None of these
10. Which of the following deals with the rearing of silkworms? 1
(a) Silviculture (b) Sericulture (c) Apiculture (d) Horticulture
11. Chlorophyll traps solar energy and converts it into _____. 1
(a) Chemical energy (b) Light energy (c) Mechanical energy (d) Electrical energy
12. The red pigment present in the RBC of the blood is _____. 1
(a) Haemoglobin (b) WBC (c) pulse (d) none of these
13. Which tissue transports sugars and other organic compounds to all parts of plants? 1
(a) Xylem (b) Epidermis (c) Phloem (d) All of these
14. Pollination refers to the: 1
(a) Transfer of pollen from anther to ovary
(b) Transfer of female gametes from anther to style
(c) Transfer of pollen from anther to stigma
(d) Transfer of pollen from stigma to anther

15. The Rabbit breed from which soft white fibre is obtained is _____ . 1
(a) Pygmy (b) Angora (c) Lohi (d) Cashmere

16. Restocking of the destroyed forests by planting new trees is called: 1
(a) forestation (b) Eutrophication (c) Reforestation (d) Desertification.

Direction: The question below consists of an Assertion (A) and a Reason (R). Use the following key to choose the appropriate answer.

(a) If both assertion and reason are correct and reason is the correct explanation of the assertion.

(b) If both assertion and reason are correct, but the reason is not the correct explanation of the assertion.

(c) If the assertion is correct, but the reason is incorrect.

(d) If the assertion is incorrect, but the reason is correct.

17. **Assertion (A):** Light travels along seven lines. 1

Reason (R): white light is composed of seven colours.

18. **Assertion (A):** Formation of rust is a chemical change. 1

Reason (R): For formation of rust, iron must be exposed to air and water.

19. **Assertion (A) :** Mushrooms are saprotrophs. 1

Reason (R) : Mushrooms take nutrients from dead and decaying matter.

20. **Assertion (A):** Project Tiger was launched by the government of India to save tigers. 1

Reason (R): Tiger population is on the verge of extinction.

Section-B

Question No. 21 to 26 are very short answer questions

21. Name the subatomic particles present in an atom with their symbols 2

22. Draw the life cycle of silk worms and describe various phases. 2

23. (a) Define a food chain . 1

(b) What are the roles of producers and decomposers in a food chain? 1

24. Describe the internal structure of human heart and write the pathway of flow of blood circulation in the human heart. 2

OR

Describe the process of excretion in human beings with labelled diagram . 2

25. A simple pendulum completes 10 oscillations in 30 seconds. What is the time period of the a simple pendulum? 2
26. What is a cyclone? Name the factors which are responsible for the cyclone formation. 2

OR

Why does the tornado suck everything near it?

Section-C

Question No. 27 to 33 are short answer questions

27. (a) Write the valencies of sodium and sulphur. 3
- (b) Write the chemical formulae of
- (i) Potassium chloride
- (ii) Magnesium oxide
28. What do mean by displacement reaction? Explain with suitable chemical reactions. 3

OR

Define rusting. Write the methods for prevention of rusting.

29. (a) Explain the process of Photosynthesis. 1
- (b) Draw labelled diagram of stomata . 1
- (c) State the role of stomata in photosynthesis 1
30. Explain the process of wool extraction. 3
31. What is the difference between uniform motion and non uniform motion? Explain with the help of examples 3
32. Differentiate between Regular reflection and Irregular Reflection of light with the help of diagram. 3
33. Mention the components required to construct an electrical circuit. Using these components draw the open circuit diagram. 3

Section-D

Question No. 34 to 36 are long answer questions.

34. (a) With the help of a suitable diagram, explain in detail the various steps involved in treating wastewater.

(b) Name any four sources of water pollution. 5

OR

(a) With the help of a suitable diagram, explain in detail the sewage system.

(b) Name any four alternative methods of sewage disposal.

35. (a) Draw a labelled diagram of a flower. 2

(b) Differentiate between Fertilisation and pollination. 2

(c) Differentiate between Unisexual flowers and bisexual flowers. 1

OR.

(a) What is meant by Vegetative propagation? How the roots ,leaves and stem of plants help in producing a new plant ? 2

(b) Differentiate between Self pollination and cross pollination 2

(c) Differentiate between Asexual reproduction and sexual reproduction 1

36. Draw the diagram of an electric bell and explain its working.

OR

(a). What is an electric fuse? What is its function? 5

(b). Give reason of the following:

Miniature Circuit Breaker (MCB) is better than electric fuse

Section-E

Question No. 37 to 39 are case-based/data -based questions with 2 to 3 short sub-parts. Internal choice is provided in one of these sub-parts. (1+1+2=4)

37. Read the passage carefully and answer the following questions.

A small village near a dense forest in the Himalayas is facing increasing pressure to clear the forest for agricultural expansion. The villagers depend on the forest for firewood, medicinal plants, and grazing land for their cattle. Sustainable practices like selective logging, reforestation, and rotational grazing can help manage the forest while meeting the community's needs. Engaging the local government through advocacy and collaboration can support forest conservation efforts. Joint Forest Management allows villagers to actively participate in forest management, providing them with a stake in its preservation. Community can organize with help of

local government educational workshops, community meetings, and use local media to spread information about the benefits of forests and the dangers of deforestation.

- (a) Why are forests considered crucial for the survival of the village community? 1
- (b) What sustainable practices could the villagers adopt to manage the forest while meeting their needs? 1
- (c) Explain the concept of "Joint Forest Management" . 2

OR

- (c) How can the community involve the local government in forest conservation efforts? 2

38. Read the passage carefully and answer the following questions.

Water on the earth has been maintained for millions of years by various processes which make the water cycle. When water circulates through the water cycle it can be found in all the three forms, i.e., solid, liquid and gas—at any given time somewhere on the earth. The solid form, snow and ice, is present as ice caps at the poles of the earth, snow-covered mountains and glaciers. Liquid water is present in oceans, lakes, rivers, and even underground. The gaseous form is the water vapour present in the air around us. The continuous cycling of water among its three forms keeps the total amount of water on the earth constant even when the whole world is using it.

- (a) What are the three forms of water? 1
- (b) What is the gaseous form of water? 1
- (c) Where is liquid water present? 2

OR

- (c) Give reason for unlimited availability of water on earth. 2

39. Read the passage carefully and answer the following questions.

In the seventeenth century, Sir Isaac Newton first observed that a thin beam of light after passing through a prism, forms a band of seven colours that include red, orange, yellow, green, blue, indigo and violet. Sometimes, after it rains, the Sun starts shining, and we can see a rainbow in the sky. The rainbow consists of seven colours and is formed by the dispersion of white light of the Sun through transparent water droplets present in the air. The band of seven colours is called spectrum. The colours of the spectrum are denoted by VIBGYOR.

- (a) Define the dispersion of light 1

- (b) What is the spectrum? 1
- (c) Explain the formation of the Rainbow. 2

OR

- (c) What will happen if a beam of light passes through a glass prism? 2

*******Best of Luck*******