BK BIRLA CENTRE FOR EDUCATION

SARALA BIRLA GROUP OF SCHOOLS
SENIOR SECONDARY CO-ED DAY CUM BOYS' RESIDENTIAL SCHOOL

MID-TERM EXAMINATION 2023-24

SCIENCE

Class: VII **Duration : 3 Hrs**
Date : 13/10/'23 **Max. Marks: 80**
Admission No: **Roll No:**

General Instructions:

(a) This question paper consists of 39 questions in 5 sections.
(b) All questions are compulsory. However, an internal choice is provided in some questions. A student is expected to attempt only one of these questions.
(c) SECTION A consists of 20 objective type questions carrying 1 mark each.
(d) 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.
(e) 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.
(f) 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.
(g) 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 chemical symbol of silver? 1

(a) Ag (b) Au (c) Si (d) None of these

2. Name the acid which is used in the manufacture of rocket fuel. 1

(a) Sulphuric acid (b) Hydrochloric acid (c) Nitric acid (d) None of these

3. Acids have: 1

(a) pH > 7 (b) pH < 7 (c) pH = 7 (d) None of these

4. Sodium chloride molecule is an example of_____ 1

(a) A mixture (b) An element (c) A compound (d) None of these

5. Oxygen molecule has _____atoms. 1

(a) 1 (b) 2 (c) 3 (d) 4

6. Which of the following is a base? 1

(a) $Mg(OH)_2$ (b) HCl (c) $CaCO_3$ (d) H_2SO_4

7. _____ acid is present in tea. 1

(a) Tartaric (b) Tannic (c) Citric (d) Acetic

8. Cockroach breathe with the help of _____ 1

(a) Spiracle (b) Gills (c) Skin (d) None of these

9. Fish breathe with the help of _____ 1

(a) Spiracle (b) Gills (c) Skin (d) None of these

10. Earthworm breathe with the help of _____ 1

(a) Spiracle (b) Gills (c) Skin (d) None of these

11. _____ is an insectivorous plant. 1

(a) Pitcher plant (b) Cactus (c) Fern (d) None of these

12. _____ is green in colour and can make food. 1

(a) Algae (b) Fungi (c) All of these (d) None of these

13. What is the range of clinical thermometer? 1

(a) 35^0 c - 42^0 c (b) 110^0 c - 142^0 c (c) 30^0 c - 53^0 c (d) None of these

14. The atmospheric pressure_____as we move upwards from the surface of earth. 1

(a) remains the same (b) Increases (c) decreases (d) None of these

15. _____ is white in colour and cannot make food. 1

(a) Algae (b) Fungi (c) All of these (d) None of these

16. _____ respiration is done in the presence of oxygen. 1

(a) Aerobic (b) Anaerobic (c) All of these (d) None of these

<u>Direction</u>: 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 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 assertion is correct, but reason is incorrect.
(d) If assertion is incorrect, but reason is correct.

17. **ASSERTION (A):** Acids are sour in taste. 1
REASON (R): Bases are soapy to touch and bitter in taste.

18. **Assertion (A)**: Leaves are green in colour. 1
Reason (R): Chlorophyll is a pigment that gives green colour to the leaf and help leaf in making food.

19. **Assertion (A**): Wind is caused by the uneven heating of the Earth's surface 1
Reason (R): This is due to the Earth's tilt and spherical shape

20. **Assertion (A)**: Peristalsis is a wave like motion. 1
Reason (R): Peristalsis helps in transferring food from mouth the stomach.

Section-B

Question No. 21 to 26 are very short answer questions

21. Write the chemical formulae for hydrochloric acid and sulphuric acid. 2

22. What are saprophytes? Give an example. 2

23. Why does breathing become faster when we do physical exercise? 2

24. What are Insulators? Give two examples. 2

25. Define the following: 2

(i) Cyclone

(ii) Monsoon winds

OR

How does an air current set up between two regions?

26. What do you mean by symbiosis? Explain. 2

OR

Explain transpiration with the help of an experiment.

Section-C

Question No. 27 to 33 are short answer questions

27. (a) Name the compound having chemical formula $AgNO_3$. 3

(b) Define matter.

(c) Name the elements present in MgO.

28. What is atom? Draw the labelled diagram of the structure of an atom. 3

OR

What is molecule? Draw the diagram of any two molecules of an elements.

29. Differentiate between internal and external respiration. 3

30. Discuss the role of tongue in our digestive system. 3

31. On which phenomenon Thermos flask works? Explain with the help of diagram. 3

32. What is clinical thermometer? Explain the construction of clinical thermometer with the help of diagram. 3

33. What damages may be caused due to the occurrence of a cyclone? List a few safety measures that can reduce the loss of life and property. 3

Section-D

Question No. 34 to 36 are long answer questions.

34. (a) Explain the process of neutralisation along with an example.

(b) What should be done to get relief from a bee sting and why? 5

OR

(a) How does slaked lime help in the treatment of acidic soil?

(b) Differentiate between bases and alkalis.

35. What are the steps of nutrition? Explain each of them. 5

OR

Explain how Amoeba takes in nutrition with the help of diagram.

36. (a) List the factors affecting air pressure . 5

(b) Why does a tornado suck everything near it?

OR

Name two characteristics of wind. Explain the working of Anemometer with help of diagram.

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.

37. There are different types of blood vessels in the body. You know that during inhalation a fresh supply of oxygen fills the lungs. Oxygen has to be transported to the rest of the body. Also, the blood picks up the waste materials including carbon dioxide from the cells. This blood has to go back to the heart for transport to the lungs for removal of carbon dioxide as you have. So, two types of blood vessels, arteries and veins are present in the body. Arteries carry oxygen-rich blood from the heart to all parts of the body. Since the blood flow is rapid and at high pressure, the arteries have thick elastic walls.

The number of beats per minute is called the pulse rate. A resting person, usually has a pulse rate between72 and 80 beats per minute. Veins are the vessels which carry carbon dioxide-rich blood from all parts of the body back to the heart. The veins have thin walls. There are valves present in veins which allow blood to flow only towards the heart.

(i) How many types of blood vessels are present in the human body? 1

(a) 4 (b) 5

(c) 7 (d) 2

(ii) What is the breathing rate of a normal resting person? 1

(a) 75-80 (b) 90

(c) 100 (d) 50

(iii) Which blood vessel carry fresh oxygen form heart to all the parts of the body? 2

OR

(iii) Why does the arteries have thick elastic walls? 2

38. **Read the passage carefully and answer the following questions.** 4

In the light of the availability of various resources in nature, natural resources can be broadly classified into two kinds- Inexhaustible and Exhaustible resources. Inexhaustible natural resources are present in unlimited quantities in nature and are not likely to be exhausted by human activities. Examples are sunlight, and air. Exhaustible resources are present in limited quantities in nature. They can be exhausted by human activities. Examples of these resources are forests, wildlife, minerals, coal, petroleum, natural gas etc. some exhaustible natural resources like coal, petroleum and natural gas. These were formed from the dead remains of living organisms (fossils). So, these are all known as fossil fuels.

(i) The total number of elements are:
(a) 118 (b) 119 (c) 120 (d) 121

(ii) Which of the following is not a mixture?
(a) Air (b) Sea water (c) Pure water (d) Soil

(iii) What does an atom consist of?

OR

Match the following:

Column A		**Column B**	
1.	Copper	a	Combining capacity of atoms
2.	Element	b	Positive charge
3.	Valency	c	Cu
4.	Proton	d	Atoms of one kind only

39. In this method, the heat travels in the form of electromagnetic waves. This does not require any medium for the transfer of heat. Energy transferred in this method is called radiant energy. This process takes place in air and water as well. Since the electromagnetic waves travel with the speed of light, the radiation is the fastest method of heat transfer. 4

(a) Name the method that does not require any medium for the transfer of heat.

(b) Why people prefer to wear the dark colour clothes in winter.

(c) Define Radiation process. Which wave travels with speed of light?

OR

In hilly areas the outer walls and roof of the houses are painted with dark colour. Why?

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