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 **SINDHI HIGH SCHOOL, BENGALURU**

**HALF YEARLY EXAMINATION [2023-24]**

**SUBJECT: SCIENCE**

**Class: VIII Max Marks: 80**

**Date: 6-10-2023 Reading Time: 8:30 to 8:45 am**

**No of Sides: 05 Writing Time: 8:45 to 11:45 am**

**General Instructions:**

1. This question paper consists of 39 questions in 5 sections.
2. All questions are compulsory.
3. **Section A** consists of 20 objective type questions carrying 1 mark each.
4. **Section B** consists of 6 Very Short questions carrying 02 marks each. Answers to these questions should in the range of 30 to 50 words.
5. **Section C** consists of 7 Short Answer type questions carrying 03 marks

each. Answers to these questions should in the range of 50 to 80 words

1. **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.
2. **Section E** consists of 3 case-based units of assessment of 04 marks each with sub-parts.

**SECTION - A**

**Select and write one most appropriate option out of the four options given for each of the questions 1 – 20**

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| **Q. NO** | **QUESTIONS** | **MARKS** |
| 1. | The molecular formula of Aluminium chloride is:  (a) AlCl2  (b) AlCl3  (c) AlCl4  (d) Al(Cl2)3 | (1) |
| 2. | Which of the following statements about a compound is correct?  (a) A compound retains the physical properties of its constituent elements  (b) The ratio of atoms of different elements in a compound is not fixed  (c) A compound can be separated into its constituent elements by physical methods of  separation  (d)  A molecule of a compound has atoms of different elements. | (1) |
| 3. | When coal burns in air then-  (a) Methane gas is formed  (b) Carbon dioxide is formed  (c) Hydrogen gas is formed  (d) oxygen gas is formed | (1) |
| 4. | Name the petroleum product used for surfacing of road-  (a) Peat (b) Lignite (c) Anthracite (d) Bitumen | (1) |
| 5. | CNG is the abbreviation of-  (a) Compressed natural gas (b) Compress natural gas  (c) Compress national gas (d) Compress nature gas | (1) |
| 6. | What valency do Sodium ions have?  (a) +2 (b) +1 (c) -2 (d) -3 | (1) |
| 7. | The removal of top layer of soil leads to  (a) desertification (b) rainfall  (c) snowfall (d) deforestation | (1) |
| 8. | Deforestation leads to -  (a) an increase in the temperature of the earth  (b) imbalance in O2 and CO2  (c) increase in rainfall  (d) both (a) and (b) | (1) |
| 9. | Which of the following drug is an antibiotic?  (a) alcohol (b) streptomycin  (c) insulin (d) vinegar | (1) |
| 10. | Deliberately injecting weak microbes into healthy body and producing antibodies to fight against strong microbes is called -  (a) Medication (b) antibiotic (c) Vaccination (d) Injection | (1) |
| 11. | Bacteria which increases fertility of the soil are called-  (a) Blue-green algae (b) Diatoms (c) Staphylococcus (d) Rhizopus | (1) |
| 12. | A big wooden box is being pushed on the ground from east to west direction. The force of friction due to ground will act on this box towards: (a) north direction (b) south direction (c)east direction (d) west direction | (1) |
| 13. | Four children were asked to arrange forces into rolling, static and sliding frictions in a decreasing order. The correct arrangement is : (a) Rolling, Static, Sliding (b) Rolling, Sliding, Static (c) Static, Sliding, Rolling (d) Sliding, Static, Rolling | (1) |
| 14. | Which of the following is true about friction?  (a) Friction is a force that occurs only on rough surface.  (b) Friction is a force that occurs only between solids.  (c) Friction can slow down the moving things.  (d) Friction is a force that only occurs when an object moves. | (1) |
| 15. | 1 hertz is equal to (a) 1 vibration per minute (b) 10 vibrations per minute (c) 60 vibrations per minute (d) 600 vibrations per minute | (1) |
| 16. | The hearing range of human ear is (a) 20 Hz to 20,000 Hz (b) less than 20 Hz (c) more than 20,000 Hz (d) 20 Hz to 25,000 Hz | (1) |
|  | **Q. No 17 to 20 are Assertion - Reasoning based questions.**  **These consist of two statements – Assertion (A) and Reason (R).**  **Answer these questions selecting the appropriate option given below:**   1. **Both A and R are true and R is the correct explanation of A.** 2. **Both A and R are true and R is not the correct explanation of A.** 3. **A is true but R is false.** 4. **A is False but R is true.** |  |
| 17. | **Assertion (A)**: Rocket has a special streamlined body.  **Reason (R)**: It increases friction.  . | (1) |
| 18. | **Assertion(A):** Light travels faster in glass than in air.  **Reason (R):** Glass is denser than air . | (1) |
| 19. | **Assertion:**  Coal is exhaustible natural resource .  **Reason:** It takes a time of 50 years to form coal. | (1) |
| 20. | **Assertion (A):** Dysentery and Malaria are caused by protozoans.  **Reason(R):** Protozoans are unicellular organisms. | (1) |
|  | **SECTION – B**  **Q. no. 21 to 26 are very short answer questions.** |  |
| 21. | Derive the molecular formula of the following compounds using steps:  (i)Calcium carbonate  (ii) Magnesium chloride | (2) |
| 22. | (a) List any two ways the farmers has adopted to control weeds in the agricultural land.  (b) Mention the precautionary measures that has to be followed by the farmers while applying weedicides. | (2) |
| 23. | What are endemic species? Name any two endemic fauna of Pachmarhi Biosphere reserve. | (2) |
| 24. | Structure of Paramecium caudatum | Download Scientific DiagramColoring Page With Spirogyra Isolated On White Background Stock  Illustration - Download Image Now - iStockIdentify the micro-organisms given below and mention the type of micro-organism.  a) b) | (2) |
| 25. | (a)Viruses are called connecting link between living and non-living world. Why?  (b) Mention any two diseases caused by viruses. | (2) |
| 26. | (a) Explain why climbing a greasy pole is very difficult.  (b) What is the force that slows down man falling with a parachute and  How ? | (2) |
|  | **SECTION - C**  **Q.no. 27 to 33 are short answer questions.** |  |
| 27. | (a) Draw a labelled diagram showing Petroleum and natural gas deposits.  (b) Write the full form of PCRA and LPG. | (3) |
| 28. | Balance the following Equations:  i) Na + H2O -----------> NaOH + H2  ii) Ca + H2O ----------> Ca (OH)2 + H2  iii) Fe + HCl -----------> FeCl2 + H2 | (3) |
| 29. | (a) Differentiate between national park and wild life sanctuaries by giving one example  For each.  (b)What are the main objectives of the Forest conservation act? | (3) |
| 30. | (a) What is the angle of incidence of a ray if the reflected ray is at an angle of 900 to the  incident ray?  (b) State the two laws of reflection. | (3) |
| 31. | (a) A simple pendulum makes 40 oscillations in 80 seconds. What is the time period and frequency of its oscillation?  (b) Two astronauts are floating close to each other in space. Can they talk to each other without using any special device? Give reasons. | (3) |
| 32. | (a) What are the factors that affect friction?  (b) Explain the importance of frictional force in our day to day life by  giving two examples. | (3) |
| 33. | Many people in world find it status symbol of wearing and keeping leather clothes and leather articles with them. Some of the shawls made out of endangered species are also in great demand and highly priced.   1. What are endangered species ? Give two examples.   (b) Explain the individual responsibility of the citizens towards the protection of endangered species. | (3) |
|  | **SECTION - D**  **Q.no. 34 to 36 are long answer questions** |  |
| 34. | (a) How is coal formed and how its formation is different from petroleum?  (b) Name any two products that we obtain from the destructive distillation of coal and mention their uses. | (3)  (2) |
| 35. | (a) With the help of diagrams differentiate between two modern methods of irrigation.  (b) Name any two traditional methods of irrigation. | (4)  (1) |
| 36. | a) Differentiate between regular and diffused reflection along with  labelled diagrams.  (b) Does diffused reflection mean the failure of the laws of reflection?  Justify.  (c) Mention any two characteristics of the image formed by a plane  mirror. | (3)  ((1)  (1) |
|  | **SECTION - E**  **Q.No’s. 37 to 39 are Case - Based questions with 2 to 3 short sub - parts.** |  |
| 37. | Fuel is the source of energy and to obtain that energy, we have to burn fuel. They produce large amount of heat energy on burning. In nature, these resources are limited and can be exhausted by human activities. These are known as exhaustible natural resources. But resources like air, sunlight are unlimited in nature and cannot be exhausted by human activity, so they are inexhaustible natural resources.  i) Mention any two advises given by Government of India towards conservation of petroleum.  ii) Why is petroleum also known as ‘black gold’?  iii) List any two uses of paraffin wax. | (2)  (1)  (1) |
| 38. | Harvesting and storage of the produce is a important task in agriculture. Cutting of crops after it is matured is called Harvesting. In harvesting crops are pulled out or cut close to the ground. It usually takes 3 to 4 months for a cereal crop to mature. Harvesting in our country is done manually or by a machine. If the harvested crop has to be kept for longer time, it has to be stored properly.  (i) Name and draw the agricultural implement used to harvest crop manually.  (ii) List the difference between threshing and winnowing.  (iii) What care needs to be taken while storing the grains? | (1)  (1)  (2) |
| 39. | We are surrounded by various sounds coming from all directions. Different types of sounds are produced by living things as well as non-living things. We are able to distinguish between the different types of sounds due to some characteristic features in them. It is the sound that helps us to communicate. We are able to speak with each other by the sounds we make.  (i) Mention the characteristics of vibration on which loudness and pitch depends on.  (ii) What do you conclude by observing following graphs and why?    (iii) Identify the part which vibrates to produce sound in the following musical instruments:   1. Sitar (b) Flute | (1)  (2)  (1) |

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