

कक्षा/ CLASS :VII

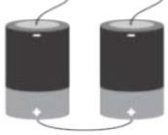
समय/ Time: 02:30 घंटे/ Hours

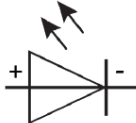
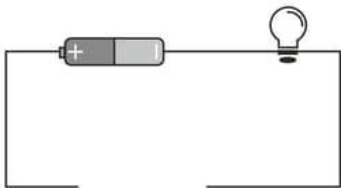
विषय/ SUBJECT : विज्ञान / SCIENCE

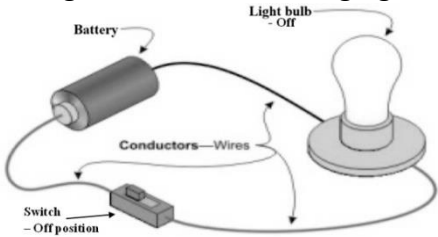
अधिकतम अंक/ Max. Marks: 60

GENERAL INSTRUCTIONS:

- The question paper comprises four sections A, B, C and D.
- All questions are compulsory. Internal choices are provided in a few questions.
- Questions of section A are MCQ of 1 mark each.
- Questions of section B are VSA type question of 2 marks each.
- Questions of section C are SA type question of 3 marks each
- Questions of section D are LA type question of 4 marks each.

Q.NO.	QUESTION	MARK
	SECTION –A (MULTIPLE CHOICE QUESTIONS) (1x18=18)	
1.	Priya's grandmother believes that an eclipse occurs because of bad luck. Priya explains using diagrams of the Sun, Earth and Moon that it happens due to the Earth's shadow. This shows which important feature of science? (a) Science is based on faith and belief (b) Science is based on evidence and reasoning (c) Science never changes (d) Science avoids experiments	1
2.	When the soil is too basic, plants do not grow well in it. To improve its quality what must be added to the soil? (a) Organic matter (b) Quicklime (c) Slaked lime (d) Calamine solution	1
3.	Which of these is the correct arrangement of electric cells in a battery? A.  B.  C.  D. 	1
4.	While checking fever, a doctor uses a thermometer containing a liquid metal. Which metal is it? (a) Copper (b) Zinc (c) Mercury (d) Silver	1
5.	A student passes carbon dioxide gas into lime water. The lime water becomes milky due to the formation of: (a) Calcium carbonate (b) Calcium oxide (c) Carbonic acid (d) Sodium carbonate	1
6.	Which of the following property is not responsible for copper to be used as electrical conduction wires? (a) Ductility (b) Colour (c) Good conductor of electricity (d) It is solid	1

7.	When an acid reacts with a base, which of the following is generally formed? (a) Salt, water and heat (c) Salt and oxygen (b) Only water (d) Water and carbon dioxide	1										
8.	In the symbol of an LED, what do the two arrows pointing outward indicate?  (a) Light coming into the LED (c) Light emitted by the LED (b) Current flowing through the wire (d) Heat produced by the battery	1										
9.	Tia used four different objects to fill the gap in an electric circuit, separately. The table shows what she found.  <table><thead><tr><th>Object in the gap</th><th>The bulb</th></tr></thead><tbody><tr><td>Plastic</td><td>Does not glow</td></tr><tr><td>Copper wire</td><td>Glow brightly</td></tr><tr><td>Wooden block</td><td>Does not glow</td></tr><tr><td>Graphite stone</td><td>Glow dimly</td></tr></tbody></table> Which of these objects best conducts electricity? (a) Wood (b) Plastic (c) Copper (d) Graphite	Object in the gap	The bulb	Plastic	Does not glow	Copper wire	Glow brightly	Wooden block	Does not glow	Graphite stone	Glow dimly	1
Object in the gap	The bulb											
Plastic	Does not glow											
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10.	On adding baking soda to vinegar, the mixture starts fizzing. What does this indicate? (a) No reaction has occurred (c) The mixture has frozen (b) A gas has been produced (d) A solid has been formed	1										
11.	A girl gets her first period during adolescence. What does this generally indicate? (a) Her body is undergoing reproductive maturation. (b) Her body has stopped developing. (c) She has become ill. (d) Her childhood growth is completely over.	1										
12.	Which of the following statement(s) is/are true about substance abuse? i. They are harmful for mental and physical health. ii. They can protect our body from infections iii. They are addictive in nature. iv. They make the body resistant to harmful organisms (a) (i) and (ii) (b) (i) and (iii) (c) (ii) and (iv) (d) (ii) and (iii)	1										
13.	Which of the following metal catches fire when it comes in contact with water? (a) Copper (b) Aluminium (c) Zinc (d) Sodium	1										
14.	A farmer adds a fertilizer to the soil for healthy plant growth. Which non-metal is mainly supplied by such fertilisers? (a) Carbon (b) Nitrogen (c) Chlorine (d) Iodine	1										
15.	A solution turns the red litmus paper to blue. Excess addition of which of the following solution would reverse the change? (a) Lime water (b) Baking soda (c) Vinegar (d) Common salt solution	1										
16.	A group of students designed a small water filter using sand, gravel, and charcoal. Their model was shown in the science exhibition. This example shows that science is: (a) Limited only to classrooms (b) Useful in solving daily life problems (c) Only about reading books (d) Not connected with technology	1										

17.	Assertion (A): Curdling of milk is a chemical change. Reason (R): In curdling of milk, no new substance is formed. (a) Both A and R are true and R is the correct explanation of A. (b) Both A and R are true and R is not the correct explanation of A. (c) A is true, but R is false. (d) A is false, but R is true.	1
18.	Assertion (A): Teenagers get acne and pimples on the face at the time of puberty. Reason (R): It is caused due to an increase in oily secretions from the skin. (a) Both A and R are true and R is the correct explanation of A. (b) Both A and R are true and R is not the correct explanation of A. (c) A is true, but R is false. (d) A is false, but R is true.	
SECTION –B (SHORT ANSWER QUESTION) (2x6=12)		
19.	Why science is called an ongoing process of discovery? Explain with an example.	2
20.	Mention any two physical changes commonly observed in both boys and girls during adolescence.	2
21.	Draw a labelled circuit diagram for the following figure. 	2
22.	Keerthi was bitten by a red ant and felt a stinging sensation. Her mother suggested applying a paste of moist baking soda to the affected area. a. Which acid present in an ant bite cause the pain? b. Why is baking soda helpful in this situation?	2
23.	With the growing use of online platforms, cyberbullying has become a serious concern. As a responsible digital citizen, suggest two effective measures that can be taken to prevent cyberbullying. OR While using a toilet, Mohini noticed that used sanitary pads were scattered near the bin. She got upset and shared her feelings with her friends. They discussed the importance of menstrual hygiene and healthy sanitary habits. Suggest two menstrual hygiene and sanitary habits you would suggest to your friends.	2
24.	A student observes that a material is shiny, hard and can be beaten into thin sheets. a. Name the physical property that allows the material to be beaten into thin sheets. b. Name the property responsible for its shiny appearance. OR Oxygen and chlorine are two important non-metals. a. Why is oxygen essential for living organisms? b. Mention one use of chlorine.	2
SECTION –C (SHORT ANSWER QUESTION) (3x6=18)		
25.	Abhi burnt a substance X over a candle flame. A white dazzling light was observed, and a white powdery ash was left behind. He mixed the ash with a small amount of water and tested the solution with red and blue litmus papers Answer the following questions: a. Identify the substance X. b. Which substance is formed after substance X gets burnt? c. What will happen to the red litmus paper when dipped in the solution of the ash?	3

26.	Aman conducted an experiment by placing two identical candles on separate plates and lighting them. He then covered one candle with an inverted glass jar while leaving the other uncovered. Answer the following questions: - What happened to the flame in both the cases? Give reason for your observation. - Based on this activity, explain the other two essential conditions required for combustion.	3
27.	Rahul left his bicycle outside in the garden during the rainy season. After a few weeks, he noticed that the handle and chain of the bicycle had developed a reddish brown layer. His science teacher told him that this is a common problem with iron objects and explained how to prevent it. - What is the reddish-brown substance seen on the bicycle called? - What are the two conditions required for rusting of iron? - Name two methods that Rahul can use to prevent the rusting of his bicycle.	3
28.	Rohan and Seema are childhood friends. As they entered adolescence, Seema noticed changes such as breast development and a high-pitched voice, while Rohan experienced a deeper voice and broader shoulders. - What are these newly developed characteristics called? - After a few years Rohan observed a bulge in his neck. What could be the possible reason for this bulge in his neck? - Adolescence is marked only by physical changes in the body. Comment. OR - Recommend any two measures to Rohan and Seema to maintain their health during adolescence.	3
29.	Manya is blindfolded. She is given two unknown solutions to test and determine whether they are acidic or basic. - Which indicator should Manya use to test the solutions and why? - Name one substance that can be used by Manya as an indicator.	3
30.	Vidyut has made the circuit as shown in figure given below. Even after closing the circuit, the lamp does not glow. List three possible reasons for this faulty operation. 	3
SECTION –D (LONG ANSWER QUESTION) (4x3=12)		
31.	Read the paragraph and answer the following questions: Rohan observed several changes happening around him during meal preparation: First, he left ice cubes in a tumbler on the counter, which melted into liquid water. He later placed the water back into the freezer to get ice again. Next, he chopped fresh vegetables into small pieces for cooking. After that, he mixed a teaspoon of vinegar with a pinch of baking soda in a bottle. He heard a fizzing sound as gas bubbles formed. He passed this gas into freshly prepared lime water, which turned milky. Finally, he lit a candle on the table and noticed the wax melting and evaporating, while the wax vapour burned to produce a flame. - Classify the melting of ice cubes as a physical or chemical change, and state whether it is reversible or irreversible. - Is cooking vegetables a physical or chemical change? State whether it is reversible or irreversible. - Explain how burning a candle involves both a physical and a chemical change in the same process.	4

32.	Read the paragraph and answer the following questions: Priya, a class 7 student tested the nature of some common substances with the help of acid-base indicators and noted down her observations in the given table. <table border="1"> <thead> <tr> <th>Substance</th><th>Blue litmus paper</th><th>Turmeric indicator</th></tr> </thead> <tbody> <tr> <td>X</td><td>Turns red</td><td>No change</td></tr> <tr> <td>Y</td><td>No change</td><td>Reddish brown</td></tr> <tr> <td>Z</td><td>No change</td><td>No change</td></tr> <tr> <td>O</td><td>Turn red</td><td>No change</td></tr> </tbody> </table> Answer the following questions: a. Substances X, Y, Z and O could be respectively: - Tamarind juice, window cleaner, soap solution and lime water - Soap solution, spinach juice, sugar solution and lemon juice - Tamarind juice, soap solution, sugar solution and lemon juice - Window cleaner, tamarind juice, sugar solution and soap solution b. What will be the colour of substance Y when reacted with China rose indicator? c. What will be the colour of substance O when reacted with red litmus paper? d. What type of substance does not change the color of either indicator?	Substance	Blue litmus paper	Turmeric indicator	X	Turns red	No change	Y	No change	Reddish brown	Z	No change	No change	O	Turn red	No change	4
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33.	Read the paragraph and answer the following questions: Riya is making a simple electric circuit using a battery, bulb, connecting wires and a switch. She observes that the bulb glows when the switch is turned ON but does not glow when the switch is OFF. Answer the following questions: - What is the function of the switch in the circuit? - In the symbol of a cell, which terminal is represented by the longer and thinner line? - Why does the bulb glow when the switch is ON? - What will happen if the filament of the bulb breaks?	4															
