



INDIAN SCHOOL AL WADI AL KABIR



CLASS: VII	DEPARTMENT: SCIENCE	DATE: 10/03/2026
MARKS: 80	FINAL EXAMINATION ANSWER KEY [SET - 2]	DURATION: 2½ HOURS

SECTION A (1 X 20 = 20)		
1	(d) Either acidic or neutral	1
2	(b) Acid rain	1
3	(c) Infiltration	1
4	(d) It is closest to the heated end of the rod	1
5	(b) Release of carbon dioxide gas	1
6	(a) Rubbing harder raises the temperature to the ignition point	1
7	(d) Steel is a good conductor of heat, but wood is not	1
8	(b) Chlorine	1
9	(b) It is basic in nature, neutralizes stomach acids, and digests carbohydrates, proteins, and fats.	1
10	(b) Multiple reflections of light	1
11	(c) Closer the object, larger the inverted image	1
12	(b) Oil glands during puberty	1
13	(b) Rapid emotional changes and search for identity	1
14	(c) Using a few dry cells connected in series to provide low voltage current to the circuit	1
15	(b) Because the Earth's shadow is wide, while the Moon's shadow covers only a small area	1
16	(c) There would be no seasons and climate would remain similar all year	1
17	(iv) A is false, but R is true	1
18	(i) Both A and R are true, and R is the correct explanation of the assertion.	1
19	(i) Both A and R are true, and R is the correct explanation of the assertion.	1
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SECTION B (2 X 6 = 12)

<p>21</p>	<p>The reaction between an acid and a base to produce salt and water with the evolution of heat is known as a neutralisation reaction.</p> <p>For example, when sodium hydroxide is added to hydrochloric acid, sodium chloride and water are obtained and heat is released.</p> <p>Sodium hydroxide + Hydrochloric acid \longrightarrow Sodium chloride + Water + Heat</p>	<p>2</p>						
<p>22</p>	<p>SEA BREEZE - During the day, the land heats up much faster than seawater. So, the air above the land becomes hotter and rises. The cool air above the sea surface moves towards land to fill the space. This flow of air from the sea towards the land is called sea breeze.</p>	<p>2</p>						
<p>23</p>	<table border="1"> <thead> <tr> <th>REVERSIBLE CHANGE</th> <th>IRREVERSIBLE CHANGE</th> </tr> </thead> <tbody> <tr> <td>Changes which are temporary and can be reversed to get back the original substance.</td> <td>Changes which are permanent and cannot be reversed to get back the original substance.</td> </tr> <tr> <td>Examples- Melting of ice, Folding of a paper</td> <td>Examples- Burning of paper, Growth of a plant from the seed</td> </tr> </tbody> </table>	REVERSIBLE CHANGE	IRREVERSIBLE CHANGE	Changes which are temporary and can be reversed to get back the original substance.	Changes which are permanent and cannot be reversed to get back the original substance.	Examples- Melting of ice, Folding of a paper	Examples- Burning of paper, Growth of a plant from the seed	<p>2</p>
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Examples- Melting of ice, Folding of a paper	Examples- Burning of paper, Growth of a plant from the seed							
<p>24</p>	<p>a) i) On burning sulfur in air (oxygen), sulfur dioxide gas is formed.</p> <p>ii) On dissolving sulfur dioxide gas in water, sulfurous acid is formed.</p> <p>iii) No, the solution will not turn red litmus blue because sulphurous acid is acidic in nature.</p>	<p>2</p>						
<p>25</p>	<p>The villi are finger-like outgrowths on the inner walls of the small intestine. The villi increase the surface area for absorption of the digested food. Each villus has a network of thin and small blood vessels close to its surface. The surface of the villi absorbs the digested food materials.</p>	<p>2</p>						
<p>26</p>	<p>a) A periscope is a simple device that allows you to see things that are hidden from direct view. It works by using two mirrors arranged at 45° angle to each other. The reflection from these mirrors allows us to see objects that are not directly visible.</p> <p><u>Practical uses of a periscope:</u></p> <ul style="list-style-type: none"> ▪ Submarines use periscopes to see above water without surfacing. ▪ Soldiers use periscopes to observe enemy movements safely from bunkers or trenches. ▪ Useful in crowds to see over taller individuals 	<p>2</p>						

SECTION C (3 X 7 = 21)

27

a) Substances which are used to test whether a given substance is acidic or basic based on the colour change.

b)

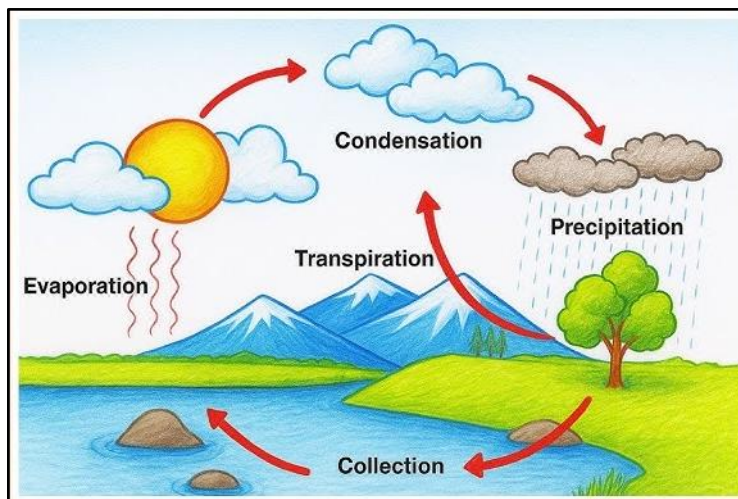
SOLUTION	BLUE LITMUS PAPER	CHINA ROSE	TURMERIC
Hydrochloric acid	Blue turns red	Magenta/Dark pink	Remains yellow
Baking soda	No change/remains blue	Green	Yellow to red

[½ × 4]
= 2

28

a) During summer, we feel comfortable wearing light-coloured clothes. In winter, wearing dark-coloured clothes keeps our bodies warm. This is because light colours are poor absorbers of heat and dark colours are good absorbers.

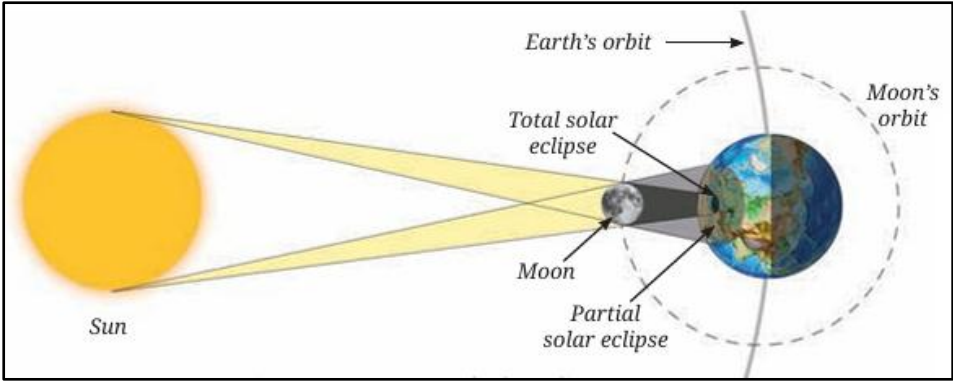
b) Water cycle:

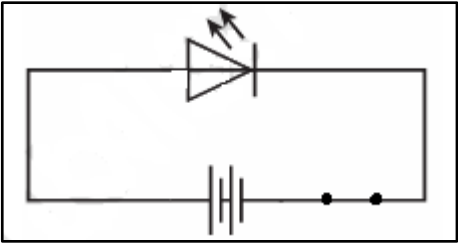


1

2

29	<p>a) When magnesium burns in air, it burns with a bright white flame and forms a white powder called magnesium oxide. When magnesium oxide is dissolved in water, it forms magnesium hydroxide, which is basic in nature.</p> <p>b) When an iron object is left in damp air (or water) for a considerable time, it gets covered with a red-brown flaky substance called rust. This is called rusting of iron.</p> <p><u>Word equation:</u></p> <p>Iron + Oxygen + Water → Rust (hydrated Iron oxide)</p>	<p>1</p> <p>2</p>
30	<p>a) Saliva moistens food and makes it easy to swallow. It helps in the process of digestion in the mouth as it contains digestive juice that breaks down starch into sugar.</p> <p>b) A - Oesophagus or Food pipe, B - Liver C - Small intestine D - Anus</p>	<p>1</p> <p>[½ × 4] = 2</p>
31	<p>a) (i) Substance abuse- Substance abuse means using harmful drugs or chemicals in the wrong way that can lead to addiction. (ii) Cyberbullying- It involves the use of digital devices such as phones, computers or online platforms to harass others by sending misleading messages, spreading false rumours, or sharing personal information without consent.</p> <p>b) Personal hygiene is important during adolescence because, at puberty, sweat and oil glands become more active. This can cause body odour and make the body more prone to infections. Maintaining good personal hygiene helps prevent infections, control body smell, and keep the body healthy and clean.</p>	<p>1 + 1</p> <p>1</p>
32	<p>a) We should avoid using electrical devices with wet hands or broken plugs because wet hands can conduct electricity easily and broken plugs may expose live wires, which can lead to electric shocks, short circuits, or even fire hazards.</p> <p>b) An electrical circuit, provides a complete path for electric current to flow through it. The current should flow through the LED only when the positive terminal (longer wire) of the LED is connected to the positive terminal of the battery, and negative terminal (shorter wire) of the LED is connected to the</p>	<p>1</p> <p>2</p>

	negative terminal of the battery. When current passes through the LED, it glows.	
33	<p>a) Rotation of Earth -Spinning of earth on its own axis. Earth takes 24 hours to complete one rotation.</p> <p>Revolution of Earth – Movement of Earth around the Sun. Earth takes 365 days and 6 hours to complete one revolution around the sun.</p> <p>b) Solar eclipse -</p> 	<p>1</p> <p>2</p>
SECTION D (5 X 3 = 15)		
34	<p>a) Oxides are compounds formed when an element reacts with oxygen.</p> <p>Non-metallic oxides are acidic in nature.</p> <p>c) Galvanization is the process of coating iron or steel with a thin layer of zinc.</p> <p>This zinc layer prevents iron from coming into contact with air and moisture, thereby protecting it from rusting.</p> <p>d) i) Sodium is a highly reactive metal that reacts quickly with air and water, producing heat and even fire. Storing it in kerosene prevents it from coming into contact with air or moisture, keeping it safe and stable.</p> <p>ii) Both copper and aluminium are good conductors of electricity, which means they allow electric current to pass through them easily. They are also ductile, meaning they can be drawn into thin wires without breaking.</p>	<p>1</p> <p>2</p> <p>1 + 1</p>

<p>35</p>	<p>a) We sneeze because dust irritates the nasal lining, and sneezing helps remove dust to keep the respiratory tract clean.</p> <p>b) When you breathe in (inhale), your chest expands as the ribs move up and outwards. The diaphragm (a dome-shaped muscle below the lungs) moves downwards during inhalation. This increases the space inside the chest, and air enters the lungs. When you breathe out (exhale), the ribs move down and inwards, and the diaphragm moves upwards, reducing space and pushing air out of the lungs.</p> <p>c) Respiration is the process by which glucose is broken down in the presence of oxygen to release energy.</p> <p>Glucose + Oxygen → Carbon dioxide + Water + Energy</p>	<p>1</p> <p>1+1</p> <p>2</p>
<p>36</p>	<p>a) Circuit diagram -</p>  <p>b) <u>Conductor</u>: The materials which allow electric current to flow through them are called conductors or good conductors of electricity (example: copper wire). <u>Insulator</u>: The materials which do not allow current to flow through them are called insulators or poor conductors of electricity (example: rubber).</p> <p>c) A – Filament B - Metal tip (one terminal)</p>	<p>2</p> <p>[1/2 × 4] = 2</p> <p>[1/2 + 1/2]</p>
<p>SECTION E (4 X 3 = 12)</p>		
<p>37</p>	<p>a) A mirror forms an image such that its left side is the object's right side and its right side is the object's left side.</p> <p>b) A virtual image is an image that cannot be obtained on a screen.</p> <p>c) The word AMBULANCE on the hospital vans is written in the form of its mirror image because any vehicle that is ahead of the ambulance van can see the laterally inverted alphabet correctly from its rear-view mirror and make way for it to pass through and enable it to reach the hospital quickly</p>	<p>1</p> <p>1</p> <p>2</p>

<p>38</p>	<p>a) Adolescence begins around the age of 11 and lasts up to about 18 or 19 years of age.</p> <p>b) During puberty, the region below the waist becomes wider, and hair starts growing under the arms and in other parts of the body.</p> <p>c) Adam’s apple is the protruding part of the throat formed due to the growth of the voice box (larynx) during puberty. It becomes visible as the larynx grows larger in boys.</p>	<p>1</p> <p>1</p> <p>2</p>
<p>39</p>	<p>a) The Pole Star appears almost stationary because the Earth’s axis of rotation points very close to it.</p> <p>b) Stars appear to move from east to west because the Earth rotates from west to east.</p> <p>c) Star trails are circular arcs seen in long exposure photographs. They are formed due to the apparent movement of stars around the Pole Star as the Earth rotates.</p>	<p>1</p> <p>1</p> <p>2</p>