


## Question Paper

**Subject: Science**

**Grade: 9<sup>th</sup>**

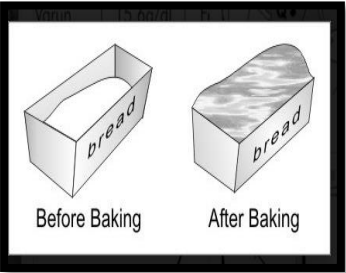
### Set-1

Q.N	Folder name & Question Code	Topic	Question with Answer Option	Image (If Any)	Correct Answer (Option-A,B,C,D)
1	3_16 Science 2524	Matter In Our Surroundings.	People sometimes add salt to the water in which eggs are to be boiled. What is the MAIN reason for this?		<b>B</b>
<b>Answer Options</b>					
		Option A Adding salt to the water before the egg is cooked makes the egg tastier.	Option B Adding salt to the water increases its boiling point and cooks the egg better.	Option C Adding salt to the water reduces the water temperature cooking the egg faster.	Option D Adding salt to the water kills micro organisms making the egg safer to eat.

2	3_15 Science 3638	Matter In Our Surroundings	Rama suspects that the LPG cylinder is leaking, and immediately turns the cylinder valve to the OFF position. What should she do next?		C
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**Answer Options**

		Option A Switch on all lights.	Option B Switch off all lights.	Option C Open all the windows.	Option D Close all the windows.
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3	3_16 Science 2523	Matter in our surroundings	A lump of bread dough in a baking tin contains air and carbon dioxide released by the yeast cells. When heated the dough rises to about twice its size. In this case, the increase in temperature has resulted in _____.		A
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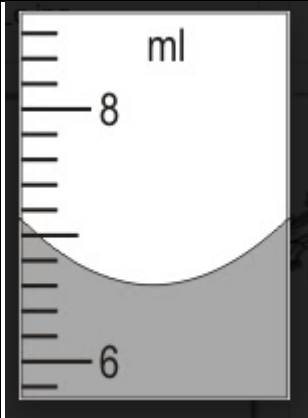
**Answer Options**

		Option A an increase in volume while the pressure remained constant.	Option B an increase of pressure while the volume remained constant.	Option C an increase in both volume and pressure.	Option D a decrease in both volume and pressure.
<b>4</b>	<b>2_9 Science  6130</b>	Matter in our surroundings	When a substance changes from LIQUID to GASEOUS state, it is said to EVAPORATE. Some substances change from SOLID to GASEOUS state without passing through the LIQUID state. They are then said to		D
<b>Answer Options</b>					
		Option A evaporate.	Option B condense.	Option C diffuse.	Option D sublime.
<b>5</b>	<b>2_9 Science  5087</b>	Matter in our surroundings	Both AIR CONDITIONERS and AIR COOLERS can be used to cool rooms. What is the main difference in the effect they produce?		B
<b>Answer Options</b>					

		Option A They are basically the same, but air conditioners cool much more.	Option B Air conditioners control the humidity of the room also, unlike air coolers.	Option C They are basically the same, but air conditioners are meant for light use only.	Option D They are basically the same, but air coolers can be used only for a few hours at a stretch.
<b>6</b>	<b>3_15 Science 3643</b>	Matter In Our Surroundings	Mercury can vaporize if heated. This means that with enough heat mercury can_____.		<b>C</b>
<b>Answer Options</b>					
		Option A be destroyed	Option B become water vapour	Option C be changed into a gas	Option D change from a liquid to a solid.
<b>7</b>	<b>3_15 Science 3648</b>	Matter in our surroundings	A student wishes to test whether adding a substance (called an anti-freeze) to water lowers the freezing point of the water. Measuring which of these variables will help her arrive at a conclusion?		<b>C</b>
<b>Answer Options</b>					

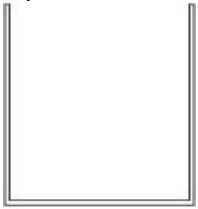


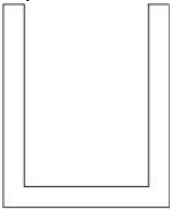
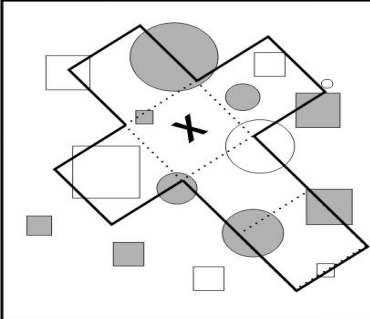
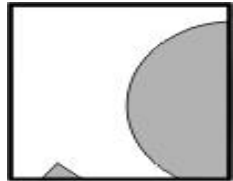
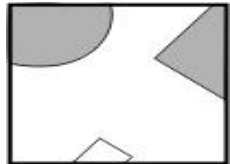
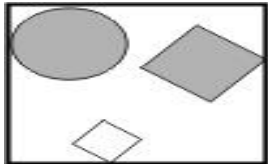
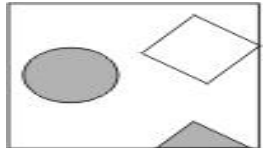
		Option A Amount of water put into the container	Option B Amount of anti-freeze added to the water	Option C Temperature at which the mixture freezes	Option D Type of thermometer used to make the measurement
8	3_15 Science 3663	Matter In Our Surroundings	The density of water is 1 g/cc. Ice floats on water with 90% of its volume inside the water. What will be the mass of a cube of ice of side 3 cm?		C

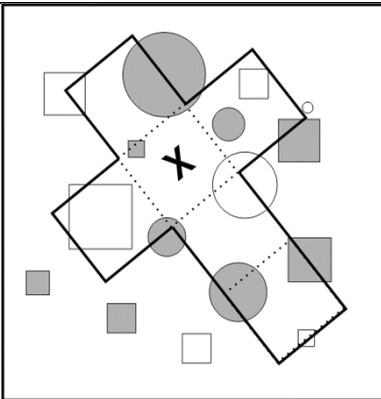
**Answer Options**

		Option A 27 g	Option B 30 g	Option C 24.3 g	Option D
9	3_15 Science  3636	Matter in our surroundings	The figure shows the amount of water in a graduated test-tube. The curved surface shown is called the meniscus. What is the correct reading of the volume of liquid?		D

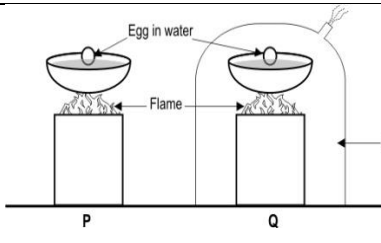
**Answer Options**

		Option A 7.1 ml	Option B 7.2 ml	Option C 6.8 ml	Option D 6.6 ml
<b>10</b>	<b>2_9 Science 6151</b>	Matter in our surroundings	Many modern tanks for water and liquid fuels are made spherical in nature. What could be the reason behind this?		<b>B</b>
<b>Answer Options</b>					
		Option A It is easier to build spherical tanks compared to tanks of other shapes.	Option B For a given surface area, spherical tanks enclose maximum volume.	Option C It is easier to transport spherical tanks when repairs, etc. are required.	Option D Liquids get preserved better when they are stored in spherical tanks.
<b>11</b>	<b>2_9 Science 6148</b>	Matter in our surroundings	Ramesh has to pour out boiling hot water into a glass. He has four glasses of the same size but of different THICKNESSES. Which of them is LEAST LIKELY to break, if hot water is poured into it?		<b>A</b>
<b>Answer Options</b>					

		Option A 	Option B 	Option C 	Option D 
		<b>A.</b>	<b>B.</b>	<b>C.</b>	<b>D.</b>
12	2_9 Science 6173	Matter in our surroundings	A box is made by cutting and folding a thick sheet having a pattern drawn on it as shown. What will the face OPPOSITE TO THE FACE MARKED 'X' look like		<b>B</b>
<b>Answer Options</b>					
		Option A 	Option B 	Option C 	Option D 

13	2_9 Science 6174	Matter in our surroundings	A box is made by cutting and folding a thick sheet having a pattern drawn on it as shown. How many faces of the cube will have a complete circle?		B
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**Answer Options**

		Option A 0	Option B 1	Option C 2	Option D 3
14	2_9 Science 5055	Matter in our surroundings	Setup P below shows an egg being boiled. In setup Q, a similar arrangement is used, but inside an apparatus which creates near-vacuum conditions. Will the egg in setup Q get cooked faster?		C

**Answer Options**

		Option A Yes, lower pressure lowers the boiling point, so the water and egg will boil earlier than setup P.	Option B No, lower pressure raises the boiling point, so the water and egg will boil later than setup P.	Option C No, lower pressure lowers the boiling point; the water will boil away quickly but the egg will not boil	Option D Yes, lower pressure raises the boiling point, so the water will get hotter and the egg will boil faster
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15	4_24 Science 10376	Matter in our surrounding	Which phase change at standard temperature and pressure represents sublimation?		A
<b>Answer Options</b>					
		<b>Option A</b> CO(s) - CO(g)	<b>Option B</b> H(l) - H(g)	<b>Option C</b> CO(l) - CO(g)	<b>Option D</b> H(s) - H(l)

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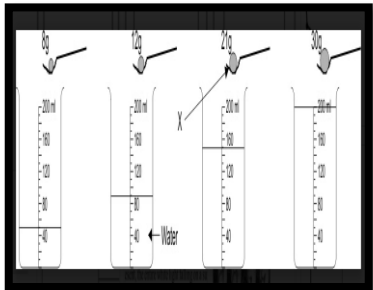
### Set-2

Q.N	Folder name & Question Code	Topic	Question with Answer Option	Image (If Any)	Correct Answer (Option-A,B,C,D)
1	4_23 Science 9127	matter in our surrounding (change in state	In a closed container, 500 g of steam is cooled until all the steam becomes water. The container is then cooled further until all the water becomes ice. Which of the following remains the same during both of these changes?		A
<b>ANSWER OPTION</b>					
		<b>Option A</b> the mass of the water	<b>Option B</b> the pressure in the container	<b>Option C</b> the temperature of the water	<b>Option D</b> the volume of the water

2	2_9 Science  6134	Is Matter Around us Pure?	Matter may be classified as elements, compounds, or mixtures. Which of the following lists includes only mixtures?		B
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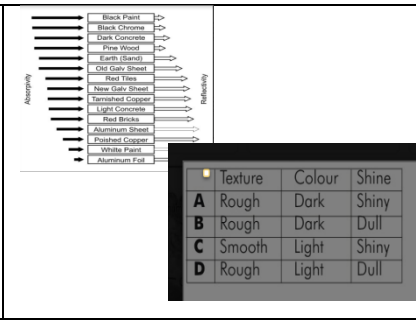
**Answer Options**

		Option A dry ice, alcohol, brass	Option B sea water, milk, air	Option C copper, gasoline, bread	Option D paint, blood, mercury
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3	2_9 Science  6150	Is Matter Around us Pure?	A maximum of 16.8 g of compound X can be dissolved in 100 ml of water. In an experiment, different masses of X were added to separate beakers containing varying volumes of water as shown. Arrange these solutions in the DESCENDING order of concentrations.		C
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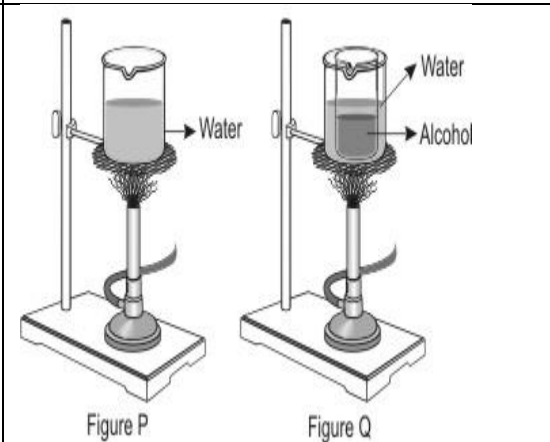
**Answer Options**

		Option A 4-1-2-3	Option B 4-2-1-3	Option C 1-4-3-2	Option D 1-3-2-4
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4	3_16  2501	Is Matter Around us Pure?	The texture, colour and shine of four surfaces A, B, C and D are as shown below. Study the diagram given below and identify which surface will absorb the greatest amount of electromagnetic energy from the Sun?	 <table border="1" data-bbox="1423 332 1673 487"> <thead> <tr> <th></th> <th>Texture</th> <th>Colour</th> <th>Shine</th> </tr> </thead> <tbody> <tr> <td>A</td> <td>Rough</td> <td>Dark</td> <td>Shiny</td> </tr> <tr> <td>B</td> <td>Rough</td> <td>Dark</td> <td>Dull</td> </tr> <tr> <td>C</td> <td>Smooth</td> <td>Light</td> <td>Shiny</td> </tr> <tr> <td>D</td> <td>Rough</td> <td>Light</td> <td>Dull</td> </tr> </tbody> </table>		Texture	Colour	Shine	A	Rough	Dark	Shiny	B	Rough	Dark	Dull	C	Smooth	Light	Shiny	D	Rough	Light	Dull	B
	Texture	Colour	Shine																						
A	Rough	Dark	Shiny																						
B	Rough	Dark	Dull																						
C	Smooth	Light	Shiny																						
D	Rough	Light	Dull																						

**Answer Options**

		Option A A	Option B B	Option C C	Option D D
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5	4_25 Science 11740	Is matter around us pure?	Figure P below shows a beaker of water being heated directly. However, some liquids like alcohol are heated using a water bath (figure Q). Which of these is NOT likely to be a reason for water baths to be used?		C
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**Answer Options**

		<p><b>Option A</b> It is safer to use them with inflammable liquids.</p>	<p><b>Option B</b> It allows more uniform heating of the liquid.</p>	<p><b>Option C</b> It is a faster way of heating a liquid.</p>	<p><b>Option D</b> It is convenient for liquids with low boiling points.</p>
6	3_15 Science  3644	IS MATTER AROUND US PURE	According to the graph, which of these is the least soluble in water at 20°C.?		B
<b>Answer Options</b>					
		Option A CaCl <sub>2</sub>	Option B KCl	Option C NaCl	Option D LiSO <sub>4</sub>

7

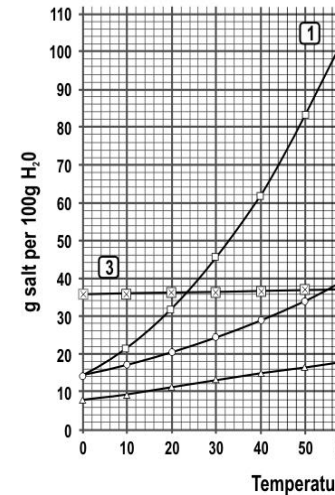
4\_23  
Science  
9162

IS MATTER  
AROUND US PURE

Which option correctly matches the data in the table to the graph.

**SALT SOLUTION A**

Salt name Formula	potassium nitrate KNO <sub>3</sub>	potassium sulphate K <sub>2</sub> SO <sub>4</sub>
Temp. deg C		
0	13.9	7.4
10	21.2	9.3
20	31.6	11.1
30	45.3	13.0
40	61.4	14.8
50	83.5	16.5
60	106.0	18.2
70		19.8
80		21.4
90		22.9
100		24.1



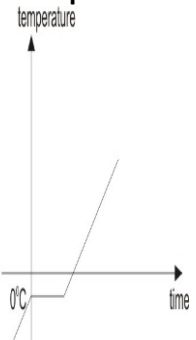
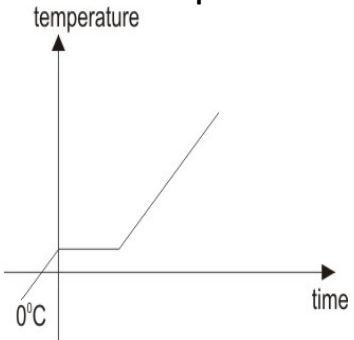
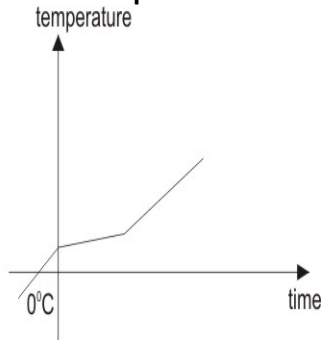
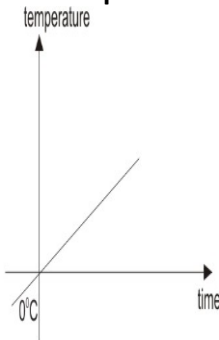
	KNO <sub>3</sub>	K <sub>2</sub> SO <sub>4</sub>	NaCl
<b>A.</b>	1	4	3
<b>B.</b>	3	1	2
<b>C.</b>	2	4	3
<b>D.</b>	1	3	4

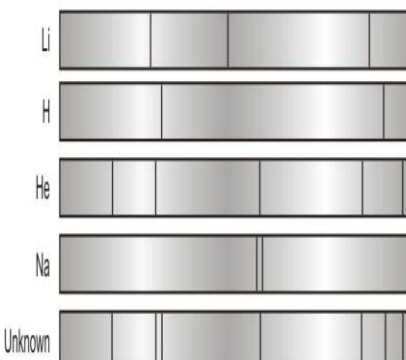
**Answer Options**

		<b>Option A</b>	<b>Option B</b>	<b>Option C</b>	<b>Option D</b>															
8	3_17 Science 1838	Is Matter Around Us Pure	Which of these BEST distinguishes a Physical Change, a Chemical Reaction and a Nuclear Reaction?	<table border="1"> <thead> <tr> <th></th> <th>Physical Change</th> <th>Chemical</th> </tr> </thead> <tbody> <tr> <td>A.</td> <td>No new substance formed</td> <td>New subs</td> </tr> <tr> <td>B.</td> <td>Change within molecule</td> <td>No chang</td> </tr> <tr> <td>C.</td> <td>No change within molecule</td> <td>Change w</td> </tr> <tr> <td>D.</td> <td>Molecules are destroyed and created</td> <td>Atoms are</td> </tr> </tbody> </table>		Physical Change	Chemical	A.	No new substance formed	New subs	B.	Change within molecule	No chang	C.	No change within molecule	Change w	D.	Molecules are destroyed and created	Atoms are	C
	Physical Change	Chemical																		
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C.	No change within molecule	Change w																		
D.	Molecules are destroyed and created	Atoms are																		
<b>Answer Options</b>																				
		<b>Option A</b>	<b>Option B</b>	<b>Option C</b>	<b>Option D</b>															
9	3_17 Science 1844	Is matter Around Us Pure	If a lighted splint is put into a small sample of a gas and a 'pop' sound is heard, the gas is identified as hydrogen. What is the 'pop' sound due to?		C															
<b>Answer Options</b>																				
		<b>Option A</b> formation of hydrogen molecule	<b>Option B</b> formation of oxygen molecule	<b>Option C</b> combustion of hydrogen	<b>Option D</b> combustion of oxygen															

10	3_17 Science 1846	Is Matter Around Us Pure	In cold countries, when snow covers and blocks roads and railway tracks, salt is often put on it. Using that fact, identify the correct graph of ice melting when salt has been put on it:		A
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**Answer Options**

		<p style="text-align: center;"><b>Option A</b></p>  <p style="text-align: center;">A</p>	<p style="text-align: center;"><b>Option B</b></p>  <p style="text-align: center;">B.</p>	<p style="text-align: center;"><b>Option C</b></p>  <p style="text-align: center;">C.</p>	<p style="text-align: center;"><b>Option D</b></p>  <p style="text-align: center;">D.</p>
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11	3_17 Science 1858	Is matter Around Us Pure	Each in the periodic table can appear in gaseous form and will produce a series of spectral lines unique to that element. Thus, scientists can identify what elements are in from the lines they find in the star's spectrum. This type of study is called spectroscopy. Below are the spectral lines of four elements and also an unknown gaseous mixture. Identify the elements in the unknown mixture		C
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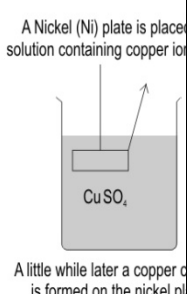


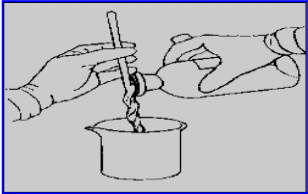
**Answer Options**

		<b>Option A</b> Lithium and sodium	<b>Option B</b> Lithium and hydrogen	<b>Option C</b> Helium and hydrogen	<b>Option D</b> Helium and sodium
12	3_17 Science 1859	Is Matter Around Us Pure	400g each of water, oil and sand are taken and heated from room temperature to 70 deg C on identical Bunsen burners. The time taken for each to reach that temperature is noted. Heating is then stopped and the time taken for each to cool to room temperature is noted. Which of these will be true?		A

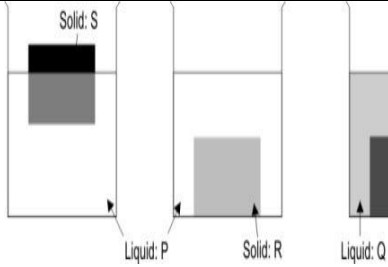
**Answer Options**

		<b>Option A</b> Substances that take more time to get heated will take more time to cool.	<b>Option B</b> Substances that take more time to get heated will take less time to cool.	<b>Option C</b> There is no connection between the time taken to get heated and to cool.	<b>Option D</b> The time taken to get heated depends on the mass, the time taken to cool does not.
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13	4_23 Science 9133	Is Matter Around Us Pure (metal and non metal)	The list given here is known as the Electrochemical Series of metals. A metal lower in the list is more reactive, that is, it will form positive ions more easily, and will also displace a metal that is higher from a solution of the latter metal. Which of the following combinations of metal and salt solutions would result in a coating being formed?	<table border="1"> <thead> <tr> <th colspan="2">Element</th> </tr> </thead> <tbody> <tr><td>Gold</td><td></td></tr> <tr><td>Silver</td><td></td></tr> <tr><td>Copper</td><td></td></tr> <tr><td>Lead</td><td></td></tr> <tr><td>Tin</td><td></td></tr> <tr><td>Nickel</td><td></td></tr> <tr><td>Cobalt</td><td></td></tr> <tr><td>Cadmium</td><td></td></tr> <tr><td>Iron</td><td></td></tr> <tr><td>Chromium</td><td></td></tr> <tr><td>Zinc</td><td></td></tr> <tr><td>Manganese</td><td></td></tr> <tr><td>Titanium</td><td></td></tr> <tr><td>Aluminium</td><td></td></tr> <tr><td>Magnesium</td><td></td></tr> </tbody> </table> <p>Increasing reactivity of metals</p>  <p>A Nickel (Ni) plate is placed in a solution containing copper ions.</p> <p>A little while later a copper coating is formed on the nickel plate.</p> <table border="1"> <thead> <tr> <th></th> <th>Metal plate</th> </tr> </thead> <tbody> <tr> <td><b>A.</b></td> <td>Silver</td> </tr> <tr> <td><b>B.</b></td> <td>Iron</td> </tr> <tr> <td><b>C.</b></td> <td>Tin</td> </tr> <tr> <td><b>D.</b></td> <td>Chromium</td> </tr> </tbody> </table>	Element		Gold		Silver		Copper		Lead		Tin		Nickel		Cobalt		Cadmium		Iron		Chromium		Zinc		Manganese		Titanium		Aluminium		Magnesium			Metal plate	<b>A.</b>	Silver	<b>B.</b>	Iron	<b>C.</b>	Tin	<b>D.</b>	Chromium	D
Element																																															
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Zinc																																															
Manganese																																															
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<b>D.</b>	Chromium																																														
<b>Answer Options</b>																																															
		<b>Option A</b> A	<b>Option B</b> B	<b>Option C</b> C	<b>Option D</b> D																																										

14	3_15 Science 3662	Is Matter Around Us Pure?	In a laboratory we often use a stirring rod while pouring liquids to _____.		C
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**Answer Options**

		Option A A	Option B B	Option C C	Option D D
15	2_9 Science 5077	MATTER IN OUR SURROUNDING	Two liquids P and Q, and two solids R and S are shown in different undisturbed arrangements below. Study the arrangements and arrange P, Q, R and S in order of INCREASING density.		B

**Answer Options**

		Option A $P < Q < R < S$	Option B $Q < S < P < R$	Option C $Q < P < S < R$	Option D $S < Q < P < R$
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# Question Paper

**Subject: Science**

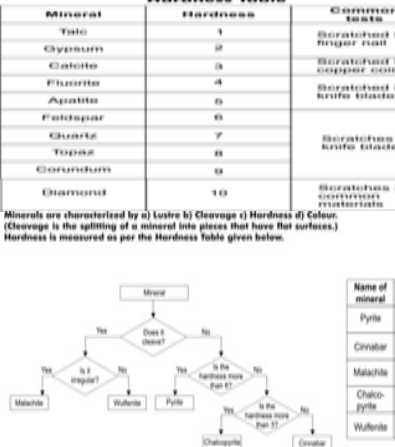
**Grade: 9<sup>th</sup>**

## Set-3

Q.N	Folder name & Question Code	Topic	Question with Answer Option	Image (If Any)	Correct Answer (Option-A,B,C,D)																																													
<b>1</b>	<b>2_9 Science 6170</b>	IS MATTER AROUND US PURE	Minu found a mineral that was able to scratch a knife blade and it did not split into pieces. Identify the mineral found by her.	<p>Use both the tables and flow chart given on this page to answer the question</p> <table border="1" style="font-size: small; margin-bottom: 5px;"> <thead> <tr> <th>Mineral</th> <th>Hardness</th> <th>Common tests</th> </tr> </thead> <tbody> <tr><td>Talc</td><td>1</td><td>Scratched by finger nail</td></tr> <tr><td>Gypsum</td><td>2</td><td></td></tr> <tr><td>Calcite</td><td>3</td><td>Scratched by copper coin</td></tr> <tr><td>Fluorite</td><td>4</td><td></td></tr> <tr><td>Apatite</td><td>5</td><td>Scratched by knife blade</td></tr> <tr><td>Feldspar</td><td>6</td><td></td></tr> <tr><td>Quartz</td><td>7</td><td>Scratches a knife blade</td></tr> <tr><td>Topaz</td><td>8</td><td></td></tr> <tr><td>Corundum</td><td>9</td><td></td></tr> <tr><td>Diamond</td><td>10</td><td>Scratches all common materials</td></tr> </tbody> </table> <p style="font-size: x-small;">Minerals are characterized by a) Lustre b) Cleavage c) Hardness d) Colour (Cleavage is the splitting of a mineral into pieces that have flat surfaces.) Hardness is measured as per the Hardness Table given below.</p> <div style="display: flex; justify-content: space-around; align-items: flex-start;"> <div style="text-align: center;"> <pre> graph TD     Mineral --&gt; Q1{Does it cleave?}     Q1 -- Yes --&gt; Malachite     Q1 -- No --&gt; Q2{Is it angular?}     Q2 -- Yes --&gt; Wulfenite     Q2 -- No --&gt; Pyrite     Pyrite --&gt; Q3{Is the mineral more than 10?}     Q3 -- Yes --&gt; Chalcopyrite     Q3 -- No --&gt; Q4{Is the mineral more than 7?}     Q4 -- Yes --&gt; Chalcopyrite     Q4 -- No --&gt; Copper                     </pre> </div> <table border="1" style="font-size: x-small;"> <thead> <tr> <th>Name of mineral</th> <th>Colour</th> </tr> </thead> <tbody> <tr><td>Pyrite</td><td>Brassy yellow</td></tr> <tr><td>Chalcite</td><td>Dark red</td></tr> <tr><td>Malachite</td><td>Bright green</td></tr> <tr><td>Chalcopyrite</td><td>Brassy yellow</td></tr> <tr><td>Wulfenite</td><td>Orange yellow</td></tr> </tbody> </table> </div>	Mineral	Hardness	Common tests	Talc	1	Scratched by finger nail	Gypsum	2		Calcite	3	Scratched by copper coin	Fluorite	4		Apatite	5	Scratched by knife blade	Feldspar	6		Quartz	7	Scratches a knife blade	Topaz	8		Corundum	9		Diamond	10	Scratches all common materials	Name of mineral	Colour	Pyrite	Brassy yellow	Chalcite	Dark red	Malachite	Bright green	Chalcopyrite	Brassy yellow	Wulfenite	Orange yellow	<b>D</b>
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		Option A Wulfenite	Option B Chalcopyrite	Option C Malachite	Option D Pyrite																																													

2	2_9 science 6172	IS MATTER AROUND US PURE	What can we say about the hardness of a material that scratches a knife blade?	Use both the tables and flow chart given on this page to answer the question 	B
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**Answer Options**

		Option A It will be 4 or more.	Option B It will be 6 or more.	Option C It will be between 6 and 9.	Option D It will be between 4 and 6.
3	2_9 Science 6171	IS MATTER AROUND US PURE	Which of these minerals has a yellowish shade and cleaves regularly?	Use both the tables and flow chart given on this page to answer the question 	D

**Answer Options**

<b>Answer Options</b>					
		Option A Pyrite	Option B Cinnabar	Option C Chalcopyrite	Option D Wulfenite
4	4_23 Science 9168	MATTER	A small cube is fixed to the corner of a large cube as shown here. From which of the directions (indicated by the arrows above) would the view of the object be as shown below?		A
<b>Answer Options</b>					

		<b>Option A</b> Only 1	<b>Option B</b> 4 and 6	<b>Option C</b> 3 and 5	<b>Option D</b> Only 2
5	4_24 Science 10395	MATTER	Till Fredrick Wohler synthesized urea in the laboratory, it was believed that only living organisms could produce organic molecules. According to people who believed this, which of these compounds could NOT be synthesized from chemicals in a laboratory?		A
<b>Answer Options</b>					
		<b>Option A</b> Sugar	<b>Option B</b> Water	<b>Option C</b> Salt	<b>Option D</b> Hydrogen gas
6	2_9 Science  6147	Atoms and molecules	A piece of zinc (Zn) - a reactive metal - was dropped into a test tube containing hydrochloric acid (HCl). The bubbling in the tube indicated that a gas was released. The gas could be which of these?		A
<b>Answer Options</b>					
		Option A Hydrogen H <sub>2</sub>	Option B Oxygen O <sub>2</sub>	Option C Methane CH <sub>4</sub>	Option D Carbon dioxide CO <sub>2</sub>
7	2_9 Science 6141	Atoms and Molecules	The first four compounds in a chemical series are CH <sub>4</sub> , C <sub>2</sub> H <sub>6</sub> C <sub>3</sub> H <sub>8</sub> C <sub>4</sub> H <sub>10</sub> , Identify the fifth.		B

**Answer Options**

		Option A C <sub>5</sub> H <sub>10</sub>	Option B C <sub>5</sub> H <sub>12</sub>	Option C C <sub>6</sub> H <sub>12</sub>	Option D C <sub>6</sub> H <sub>14</sub>
<b>8</b>	<b>3_15 Science 3635</b>	Atoms and Molecules	What happens to the individual molecules in a vegetable when we eat the vegetable?		<b>D</b>

**Answer Options**

		Option A Individual molecules are always broken down into their constituent atoms during the digestion process.	Option B Individual molecules are always completely destroyed during the process of eating and digestion.	Option C Individual molecules are always unaffected and stay in their original form in our bodies.	Option D Individual molecules may stay unaffected or their atoms may recombine to form different molecules.
<b>9</b>	<b>3_16 Science 2496</b>	Atoms and Molecules	Which of these is/are conserved during a chemical reaction?		<b>C</b>

**Answer Options**

		Option A mass only	Option B charge only	Option C both mass and charge	Option D neither mass nor charge



10	3_16 Science 2508	Atoms and Molecules	The carbon atom forms a part of all the major molecules found in living things. Which of the following does not contain carbon?		B
<b>Answer Options</b>					
		Option A DNA	Option B HCl	Option C Plastics	Option D Diesel
11	3_17 Science 1825	STRUCTURE OF ATOM	Compared to a chlorine atom, Cl, a chlorine ion Cl <sup>-</sup> , will have _____		C
<b>Answer Options</b>					
		<b>Option A</b> one proton less	<b>Option B</b> one neutron more	<b>Option C</b> one electron more	<b>Option D</b> one neutron less and one proton less
12	3_17 Science 1836	Atom and molecules	Do atoms have colour?		D
<b>Answer Options</b>					

		<b>Option A</b> Yes. Atoms have different colours depending on their atomic composition.	<b>Option B</b> Yes. Atoms have different colour depending on the state of substance.	<b>Option C</b> No. All atoms are colourless (that is, they are transparent.)	<b>Option D</b> (The question is meaningless as colour has no meaning at the atomic level)
13	4_23 Science 9160	ATOMS AND MOLECULES	In 1911, the physicist Ernest Rutherford discovered that atoms have tiny, dense nuclei by shooting positively charged particles at a very thin gold foil, Which physical property of gold was used by Rutherford in his gold leaf experiment?		B
<b>Answer Options</b>					
		<b>Option A</b> non corrosive	<b>Option B</b> highly malleable	<b>Option C</b> highly ductile	<b>Option D</b> non reactive
14	4_23 Science 9139	ATOMS AND MOLECULES	An ion with 13 protons, 14 neutrons, and a charge of 3 <sup>+</sup> has an atomic number of		B
<b>Answer Options</b>					
		<b>Option A</b> 10	<b>Option B</b> 13	<b>Option C</b> 14	<b>Option D</b> 27

15	3_17 Science 1831	STRUCTURE OF ATOM	Which element is found in both sodium chlorate and zinc nitrate?		C
<b>Answer Options</b>					
		<b>Option A</b> nitrogen	<b>Option B</b> Hydrogen	<b>Option C</b> oxygen	<b>Option D</b> Chlorine

## Question Paper


**Subject: Science**

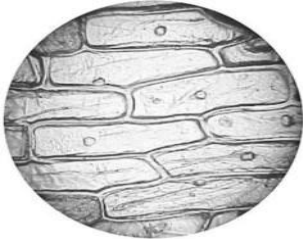
**Grade: 9<sup>th</sup>**

### Set-4

Q.N	Folder name & Question Code	Topic	Question with Answer Option	Image (If Any)	Correct Answer (Option-A,B,C,D)
1	2_9 Science 6145	STRUCTURE OF ATOM	Atoms consist of electrons, protons and neutrons. Isotopes of an element show similar chemical properties, but have different atomic weights. Thus they are likely to have:		D
<b>Answer Options</b>					
		Option A same number of	Option B same number of electrons and neutrons;	Option C same number of neutrons	Option D same number of

		electrons, protons and neutrons.	different number of protons	and protons; different number of electrons	electrons and protons; different number of neutrons
<b>2</b>	<b>3_15 Science 3654</b>	STRUCTURE OF ATOM	We know that like charges repel each other. Then how do the protons, which are all positively charged, stay together in an atom's nucleus?		<b>C</b>
<b>Answer Options</b>					
		Option A The neutral charge of the neutron keeps them together.	Option B Nuclei keep decaying in short intervals because of this.	Option C The nucleic force is stronger than their mutual repulsion.	Option D That like charges repel is not true at the level of the nucleus.
<b>3</b>	<b>3_16 Science 2536</b>	STRUCTURE OF ATOM	The number of protons and neutrons in the atom of an element are represented in the given form. Uranium-238 undergoes radioactive decay by losing an alpha particle to produce Thorium. This is expressed mathematically by the following equation. What is the number of protons and neutrons in an alpha particle?	<p>Number of neutrons + protons –</p> <p>Number of protons –</p> ${}_{92}^{238}\text{U} \longrightarrow {}_{90}^{234}\text{Th} + \text{Alph}$	<b>C</b>
<b>Answer Options</b>					
		Option A 2 protons and no neutrons	Option B 4 protons and no neutrons	Option C 2 protons and 2 neutrons	Option D No protons and 4 neutrons

<b>4</b>	<b>3_16 Science 2537</b>	STRUCTURE OF ATOM	The half-life of a radioactive material is the time in which half its atoms decay. Technetium-99 is a radioactive material with a half-life of 6 days. It is used to study blood flow around the body. A sample of technetium-99 has an activity of 96 counts per minute when injected into a patient's blood stream. Its activity after 18 days would be		<b>D</b>
<b>Answer Options</b>					
		Option A 48 counts per minute	Option B 24 counts per minute	Option C 16 counts per minute	Option D 12 counts per minute
<b>5</b>	<b>3_16 Science 2519</b>	The fundamental unit of life	Sunil views a slide of onion root cells in a compound microscope under low power objective. He wants to increase the magnification to see the slide better. His teacher tells him to centre the portion of the slide he wants to see in the field of view, before he shifts to the high power objective. This is important because _____		<b>A</b>
<b>Answer Options</b>					
		Option A Under high power a smaller area of the slide is	Option B Under high power a larger area of the slide is observed.	Option C Under high power the entire slide is magnified.	Option D Under high power focussing is not possible at all.

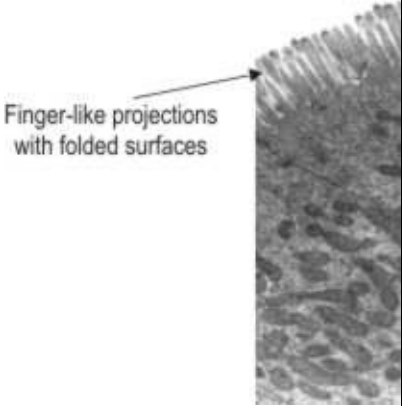
		observed.			
6	3_16 Science 2520	The fundamental unit of life	The diameter of a field of view while using a 10X objective in a microscope is determined to be 2 millimetres (mm). From the picture of the cells as observed in the picture, the average length of each cell is about: (1mm = 1000 micrometres)		B

**Answer Options**

		Option A 250 micrometres	Option B 1000 micrometres	Option C 2000 micrometres	Option D 4000 micrometres										
7	3_17 Science 1833	FUNDAMENTAL UNIT OF LIFE	The table below describes some of the organelles visible in a cell under a microscope. Identify the type of organism to which the cell belongs.	<table border="1" data-bbox="1220 816 1598 1101"> <thead> <tr> <th><i>Cell Organelle</i></th> <th><i>Description</i></th> </tr> </thead> <tbody> <tr> <td>Cell Wall</td> <td>Present</td> </tr> <tr> <td>Vacuole</td> <td>Large</td> </tr> <tr> <td>Centriole</td> <td>Not visible</td> </tr> <tr> <td>Nucleus</td> <td>Present</td> </tr> </tbody> </table>	<i>Cell Organelle</i>	<i>Description</i>	Cell Wall	Present	Vacuole	Large	Centriole	Not visible	Nucleus	Present	B
<i>Cell Organelle</i>	<i>Description</i>														
Cell Wall	Present														
Vacuole	Large														
Centriole	Not visible														
Nucleus	Present														

**Answer Options**

		<b>Option A</b> It is the cell of an animal.	<b>Option B</b> It is the cell of a plant.	<b>Option C</b> It is the cell of a bacterium.	<b>Option D</b> It is the cell of a virus.
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8	4_24 Science 10390	FUNDAMENTAL UNIT OF LIFE	Outer surfaces of some cells are folded into finger-like projections as shown in the figure here. Which of the following could be the function of such folded surfaces	 <p>Finger-like projections with folded surfaces</p>	C
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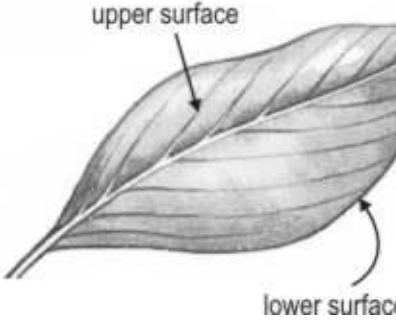
**Answer Options**

		<b>Option A</b> to increase the energy production in the cell	<b>Option B</b> to increase the rate of cell division of the cell	<b>Option C</b> to increase the absorption of nutrients by the cell	<b>Option D</b> to help the cell move about much more effectively
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9	3_17 Science 1847	TISSUES	Among the following, which has the highest BRAIN TO BODY LENGTH ratio?		B
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**Answer Options**



		<b>Option A</b> Human	<b>Option B</b> Monkey	<b>Option C</b> Cat	<b>Option D</b> Squirrel
10	4_24 Science 10360	TISSUES	In a leaf, chloroplast-containing cells are known to be the sites of photosynthesis. In which part of the leaf are the majority of chloroplast-bearing cells likely to be found?	 <p>The diagram shows a single leaf with a central vein and several smaller veins branching out. An arrow points to the top of the leaf, labeled 'upper surface'. Another arrow points to the bottom of the leaf, labeled 'lower surface'.</p>	A
<b>Answer Options</b>					
		<b>Option A</b> upper surface of the leaf	<b>Option B</b> lower surface of the leaf	<b>Option C</b> equally throughout the leaf	<b>Option D</b> edges of the leaf
11	4_25 Science 11801	TISSUES	The figure below shows a potometer with its parts marked. Its functioning is described below: shoot is held in place in the tube using a rubber stopper with a hole. A bubble is introduced into the capillary. The position of the bubble is set at the start of the experiment by turning the tap on the reservoir. The distance the bubble travels in a given time is noted. What does the potometer probably measure?		C

**Answer Options**

		<b>Option A</b> Oxygen intake by a plant.	<b>Option B</b> Carbon dioxide intake by a plant.	<b>Option C</b> Water intake by a plant.	<b>Option D</b> Effect of water salinity on a plant.
12	4_23 Science 9131	TISSUES	Cell theory states that all organisms are made up of one or more similar units of organization called cells. Which of the following organisms do not strictly adhere to this theory?		C

**Answer Options**

		<b>Option A</b> protozoa	<b>Option B</b> bacteria	<b>Option C</b> viruses	<b>Option D</b> algae
13	4_24 Science 10352	TISSUES	Which of the following protects the ANIMAL cell from the outside environment?		B

**Answer Options**

		<b>Option A</b> Cell wall	<b>Option B</b> Plasma membrane	<b>Option C</b> Nuclear membrane	<b>Option D</b> Cytoplasm
<b>14</b>	<b>2_9 Science 5071</b>	Diversity In Living Organisms	Animals which have three body parts, each having one pair of legs are called:		<b>C</b>
<b>Answer Options</b>					
		Option A arachnids	Option B amphibians	Option C insects	Option D beetles
<b>15</b>	<b>2_9 Science 6132</b>	Diversity In Living Organisms	One of the purposes of HAIR in mammals is to keep them warm. How do elephants and rhinos - which are not completely covered by hair - keep themselves warm?		<b>D</b>
<b>Answer Options</b>					
		Option A They have a layer of fat instead of hair.	Option B They move around a lot which keeps them warm.	Option C They have hair underneath the skin which keeps them warm.	Option D They live in the tropics where the surrounding temperatures are not too low.



## Question Paper

**Subject: Science**

**Grade: 9<sup>th</sup>**

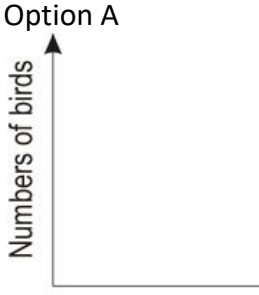
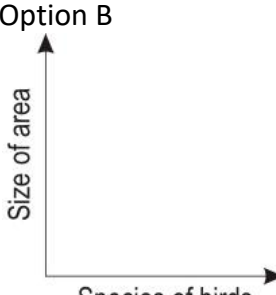
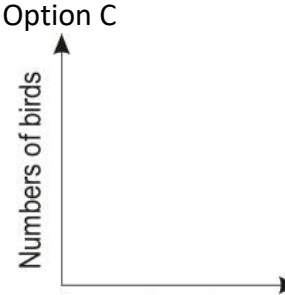
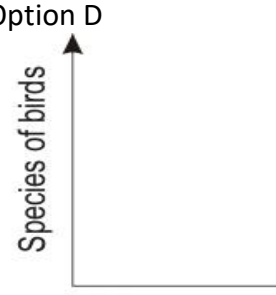
**Set-5**

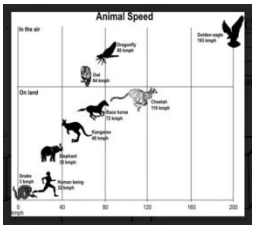
Q.N	Folder name & Question Code	Topic	Question with Answer Option	Image (If Any)	Correct Answer (Option-A,B,C,D)																																		
<b>1</b>	<b>3_15 Science 3659</b>	Diversity In Living Organisms	Which of the given species has a dark-coloured body with hair on it, and usually less than 5 offspring on an average?	<p>Some characteristics of a few species are given below. Study the table and answer the question.</p> <table border="1" style="margin-left: auto; margin-right: auto; border-collapse: collapse;"> <thead> <tr> <th rowspan="2">Characteristics</th> <th colspan="4">Beetle</th> </tr> <tr> <th>Mouse</th> <th>Porcupine</th> <th>Barn Swallow</th> <th>Hen</th> </tr> </thead> <tbody> <tr> <td>Average Number of Offspring</td> <td>10</td> <td>2</td> <td>4</td> <td>12</td> </tr> <tr> <td>Average Adult Body Weight</td> <td>0.08</td> <td>3.00</td> <td>0.50</td> <td>1.50</td> </tr> <tr> <td>Body Covering</td> <td>Hair</td> <td>Plumage on tail</td> <td>Feathers</td> <td>Feathers</td> </tr> <tr> <td>Average Number of Progenies Species</td> <td>15</td> <td>3</td> <td>1</td> <td>20</td> </tr> <tr> <td>Body Colouring</td> <td>Dark</td> <td>Dark</td> <td>Dark</td> <td>Light</td> </tr> </tbody> </table>	Characteristics	Beetle				Mouse	Porcupine	Barn Swallow	Hen	Average Number of Offspring	10	2	4	12	Average Adult Body Weight	0.08	3.00	0.50	1.50	Body Covering	Hair	Plumage on tail	Feathers	Feathers	Average Number of Progenies Species	15	3	1	20	Body Colouring	Dark	Dark	Dark	Light	<b>B</b>
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<b>Answer Options</b>																																							
		Option A Mouse	Option B Porcupine	Option C Barn swallow	Option D Chicken																																		

2	3_15 Science 3660	Diversity In Living Organisms	According to this chart, there appears to be a relationship between the average number of offspring per species and the _____ of the species'!	Some characteristics of a few species are given below. Study the table and answer the question.	C
<b>Answer Options</b>					
		Option A average adult mass	Option B body covering	Option C average number of predators	Option D body colouring
3	3_15 Science 3656	Diversity In Living Organisms	Some students counted the birds in an area. They counted the number of species present and the number of birds in each species. Which of these would be best to use to report the results?		C

Characteristic	Species		
	Mouse	Porcupine	B
Average Number of Offspring	10	2	
Average Adult Mass(kg)	0.08	3.00	
Body Covering	Hair	Plates and hair	
Average Number of Predatory Species	15	3	
Body Colouring	Dark	Dark	

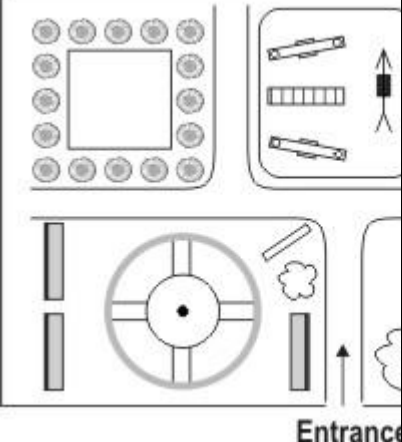

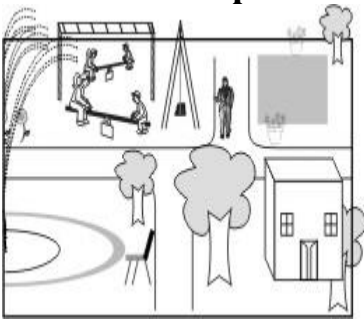
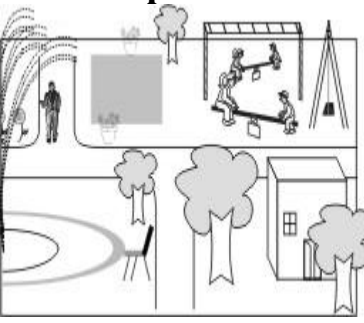
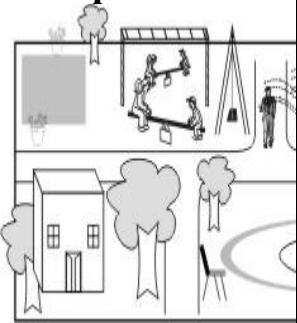
**Answer Options**

		<p><b>Option A</b></p>  <p><b>A.</b></p>	<p><b>Option B</b></p>  <p><b>B.</b></p>	<p><b>Option C</b></p>  <p><b>C.</b></p>	<p><b>Option D</b></p>  <p><b>D.</b></p>
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<b>4</b>	<b>2_9 Science 6140</b>	<p>Diversity In Living Organisms</p>	<p>Which of these is a valid conclusion that can be drawn from the chart shown alongside?</p>		<b>B</b>
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**Answer Options**

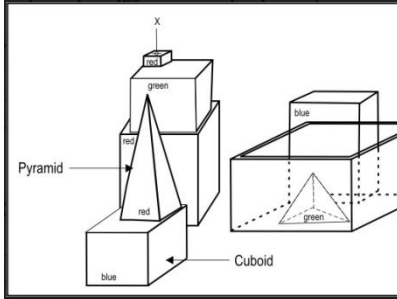
		<p><b>Option A</b> No land animal can achieve a speed higher than any flying animal.</p>	<p><b>Option B</b> A dragonfly can travel faster than a race horse.</p>	<p><b>Option C</b> A race horse travels much faster with a rider than without.</p>	<p><b>Option D</b> A human being would beat an elephant in a race.</p>
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5	4_25 Science 11750	Motion	See the representation of a park in the map below. Which of these scenes may a visitor entering the park from the entrance see?		A
<b>Answer Options</b>					
		<p style="text-align: center;"><b>Option A</b></p> 	<p style="text-align: center;"><b>Option B</b></p> 	<p style="text-align: center;"><b>Option C</b></p> 	<p style="text-align: center;"><b>Option D</b></p> 

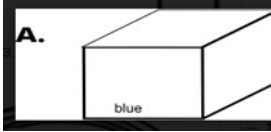



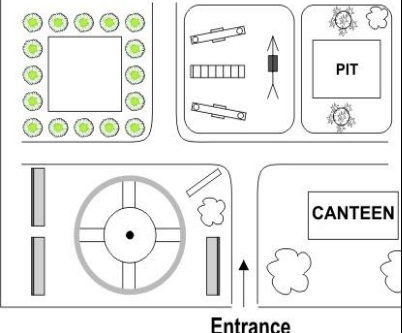
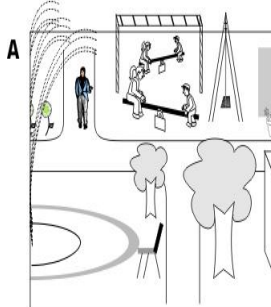
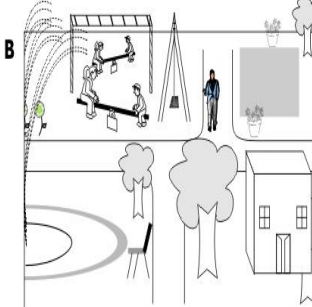
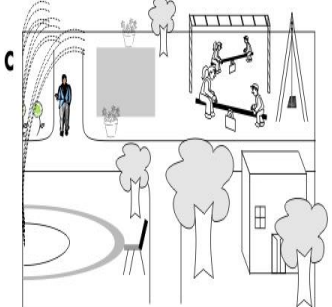
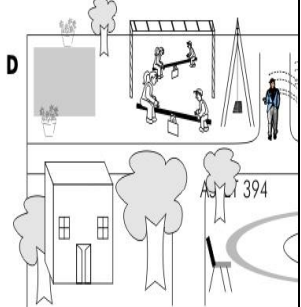


6	4_24 Science 10386	Motion	Which of these maps is better to use if we want to get a rough estimate of how far Alaska (a state in north-western USA) is, from Japan?		B
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**Answer Options**

		<b>Option A</b> Map P is better.	<b>Option B</b> Map Q is better.	<b>Option C</b> Maps P and Q are equally good.	<b>Option D</b> Neither map P nor Q may be used.
7	2_9 Science 6142	Motion  *(General topic for logical reasoning)	Blocks arranged like these are used to train robots to perform everyday tasks, and test their recognition skills. In the arrangement alongside, if a robot is instructed to 'bring the cuboid having the same colour as the pyramid inside the open box', which block should it bring?		C

**Answer Options**

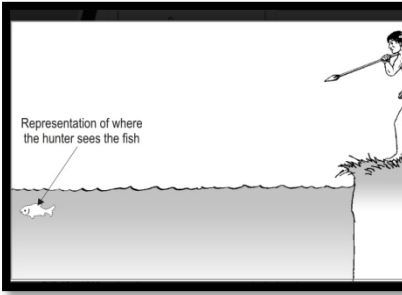
		Option A 	Option B 	Option C 	Option D 
8	2_9 Science  5078	Motion  *(General topic for logical reasoning)	See the representation of a park in the map below. Which of these scenes may be seen by a visitor entering the park from the entrance?		A
<b>Answer Options</b>					
		Option A 	Option B 	Option C 	Option D 
9	2_9 Science 6137	Motion	When a ball is thrown as shown in the figure, what is the path it is likely to take?		A

**Answer Options**


<b>10</b>	<b>3_15 Science  3661</b>	Motion	When a car turns, its front wheels do not turn by the same amount. In order that the car turn around a common point, the wheel on the side to which the car is turning, turns more than the other. Which of these correctly shows the alignment of a car's wheels when it is turning to its right?		<b>A</b>

**Answer Options**

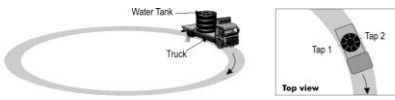
		Option A	Option B	Option C	Option D
					

<b>11</b>	<b>3_15 Science  3664</b>	Motion	A hunter sees a fish which is swimming in clear water as shown in the figure. To hit the fish, he should take aim adjusting for the fish's motion and _____		<b>B</b>
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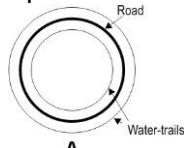
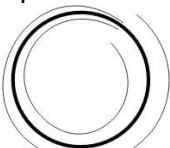
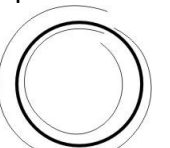
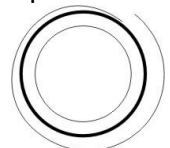
**Answer Options**

		Option A exactly at the depth the fish appears to him to be.	Option B a little below where the fish appears to him to be.	Option C a little above where the fish appears to him to be.	Option D at the fish's eye, exactly where it appears to be.
<b>12</b>	<b>3_16</b>  <b>Science</b>  <b>2535</b>	MOTION	The shortest airline route from Moscow in Russia to Montreal in Canada is likely to be which of these shown on the world map?		<b>D</b>

**Answer Options**

		Option A A	Option B B	Option C C	Option D D
<b>13</b>	<b>3_16</b>  <b>Science</b>  <b>2539</b>	MOTION	A truck is carrying a water tank which has two taps on either side as shown in the figure. The taps are opened as the truck starts moving in the circular path at a constant speed. As the truck just completes the circle, the water in the tank runs out completely. What will be the shape of the water trail on the ground if seen from the top?		<b>B</b>

**Answer Options**

<b>Answer Options</b>					
		<b>Option A</b>  <b>A</b>	<b>Option B</b>  <b>B</b>	<b>Option C</b>  <b>C</b>	<b>Option D</b>  <b>D</b>
<b>14</b>	<b>2_9</b>  <b>Science</b>  <b>6133</b>	<b>MOTION</b>	<p>The unit of distance is metres. The unit of time is seconds. Hence the speed of a person who walks 100 metres in 50 seconds is 100m divided by 50 seconds which is 2 m/s or 2 metres per second. To find out the speed of gas moving through a large gas pipeline, an oil company measures that 10 kg of gas flows every 10 seconds. The mass flow rate is obtained by dividing the distance covered by the time taken to cover it. Then, the mass flow rate in the pipeline is expressed in the unit ---</p>		<b>B</b>
<b>Answer Options</b>					
		<b>Option A</b> m/s	<b>Option B</b> kg/s	<b>Option C</b> Kg/m	<b>Option D</b> s/kg
<b>15</b>	<b>2_9</b>  <b>Science</b>  <b>5083</b>	<b>MOTION</b>	<p>The rate of growth of hair on the human head has been estimated as about 0.44 mm per day. Assuming that this rate is uniform, about what <b>LENGTH</b> of hair (considering just 1 strand) would a normal male adult cut in 20 years?</p>		<b>B</b>

<b>Answer Options</b>					
		Option A About 30 cm.	Option B About 3 m.	Option C About 30 m.	Option D About 300 m.

## Question Paper

**Subject: Science**

**Grade: 9<sup>th</sup>**

**Set-6**

Q.N	Folder name & Question Code	Topic	Question with Answer Option	Image (If Any)	Correct Answer (Option-A,B,C,D)
1	2_9 Science 6158	MOTION	A ball is thrown vertically upwards, and then caught again after 10seconds.Which of these graphs shows how its SPEED changes during its motion?		C
<b>Answer Options</b>					
		Option A	Option B	Option C	Option D

		<p>Speed</p> <p>0 Time 1</p> <p><b>A</b></p>	<p>Speed</p> <p>0 Time 10s</p> <p><b>B</b></p>	<p>Speed</p> <p>0 Time 10s</p> <p><b>C</b></p>	<p>Speed</p> <p>0 Time 10s</p> <p><b>D</b></p>
<b>2</b>	<b>2_9</b> <b>Science</b> <b>6161</b>	MOTION	If the earth (which is revolving around the sun in the direction shown) is at P at 12:00:01 AM on January 1, 2000 a leap year, where will it be at 12:00:01 AM on January 1, 2001?	<p><b>B</b></p>	
<b>Answer Options</b>					
		Option A Exactly at the same position P.	Option B A little ahead of the position P.	Option C A little behind the position P.	Option D At the position Q shown.
<b>3</b>	<b>2_9</b> <b>Science</b> <b>6166</b>	MOTION	Water is flowing through a pipe having a circular cross-section. The diameter of the pipe reduces in section P as shown. How will the speed of the water change in section P?	<p><b>A</b></p>	



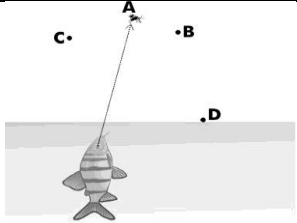
**Answer Options**

		Option A It will increase.	Option B It will reduce.	Option C It will stop altogether.	Option D It will not change.
<b>4</b>	<b>3_15 Science 3645</b>	MOTION	A truck driver drove 200 kilometres in 6 hours as shown in the graph. At which of the following times was the truck moving the slowest?		<b>B</b>

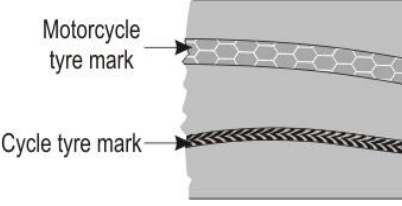
**Answer Options**

		Option A About 1 hr after he started	Option B About 3 hrs after he started	Option C About 4.5 hrs after he started	Option D About 5.5 hrs after he started
<b>5</b>	<b>3_15 Science 3657</b>	MOTION	In which of these cases ROTATIONAL MOTION is not there?		<b>B</b>

**Answer Options**

		Option A operating a pulley	Option B hitting a shuttlecock	Option C riding a bicycle	Option D using a beam balance
6	3_16  Science  2529	Force and laws of motion	Archer Fish are known to sight prey and then knock them off using a powerful jet of water. Where should the insect be for the Archer Fish to knock off the prey by using a powerful jet of water?		B

**Answer Options**

		Option A A	Option B B	Option C C	Option D D
7	3_15  Science  3670	Force and laws of motion	Tyre marks from a motorcycle and a bicycle are seen on a road. A square section of the road is made of concrete and does not display any marks. It is not possible for any vehicle to get off the road in the part shown .We can deduce WITH CERTAINTY:		B

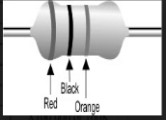
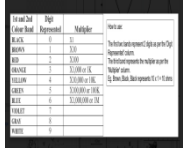
**Answer Options**

		Option A that the motorcycle passed before the cycle.	Option B that the cycle passed before the motorcycle .	Option C the cycle's direction of passing.	Option D the motorcycle 's direction of passing.
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8	2_9 Science  5061	Work and Energy	When Ram was about to switch on the light in his room, his sister stopped him. She told him that he should first DRY his hands (which were wet), before touching the electric switch.(Was Ram's sister correct? )Why / why not?		C
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**Answer Options**

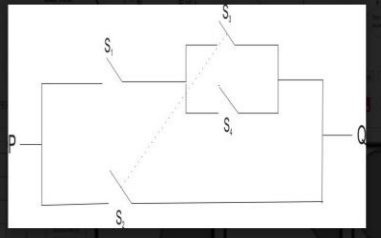
		Option A Yes. The water can cause a short circuit (There is no increased danger to Ram)	Option B No. We should be careful in any case - dry or wet makes no difference.	Option C Yes. Wetness reduces body resistance and increases danger of shock.	Option D No. Water is a poor conductor of electricity, hence wet fingers are safer.
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9	2_9 Science 5062	Work and Energy	Resistors are semi-conductor devices which are important components of electronic circuits. Resistance is measured in OHMS, and each resistor has a rating in ohms. Because a resistor is small and may be fixed in any orientation, its resistance value is coded on it using coloured bands rather than writing its resistance value on it. A colour code is used to determine the value of a resistor as per this table. What is the resistance of the resistor shown here?	 	D
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**Answer Options**

		Option A 1000 ohms	Option B 20 ohms	Option C 2000 ohms	Option D 20000 ohms																																	
<b>10</b>	<b>2_9 Science  5063</b>	Work and Energy	Resistors are semi-conductor devices which are important components of electronic circuits. Resistance is measured in OHMS, and each resistor has a rating in ohms. Because a resistor is small and may be fixed in any orientation, its resistance value is coded on it using coloured bands rather than writing its resistance value on it. A colour code is used to determine the value of a resistor as per this table. Which three colour bands represent 600 ohms?	<table border="1"> <thead> <tr> <th>1st and 2nd Colour Band</th> <th>Digit Represented</th> <th>Multiplier</th> </tr> </thead> <tbody> <tr><td>BLACK</td><td>0</td><td>X1</td></tr> <tr><td>BROWN</td><td>1</td><td>X10</td></tr> <tr><td>RED</td><td>2</td><td>X100</td></tr> <tr><td>ORANGE</td><td>3</td><td>X1,000 or 1K</td></tr> <tr><td>YELLOW</td><td>4</td><td>X10,000 or 10K</td></tr> <tr><td>GREEN</td><td>5</td><td>X100,000 or 100K</td></tr> <tr><td>BLUE</td><td>6</td><td>X1,000,000 or 1M</td></tr> <tr><td>VIOLET</td><td>7</td><td></td></tr> <tr><td>GRAY</td><td>8</td><td></td></tr> <tr><td>WHITE</td><td>9</td><td></td></tr> </tbody> </table> <p>How to use: The first two bands represent 2 digits as per the 'Represented' column. The third band represents the multiplier as per the 'Multiplier' column. Eg. Brown, Black, Black represents <math>10 \times 1 = 10</math></p>	1st and 2nd Colour Band	Digit Represented	Multiplier	BLACK	0	X1	BROWN	1	X10	RED	2	X100	ORANGE	3	X1,000 or 1K	YELLOW	4	X10,000 or 10K	GREEN	5	X100,000 or 100K	BLUE	6	X1,000,000 or 1M	VIOLET	7		GRAY	8		WHITE	9		<b>A</b>
1st and 2nd Colour Band	Digit Represented	Multiplier																																				
BLACK	0	X1																																				
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BLUE	6	X1,000,000 or 1M																																				
VIOLET	7																																					
GRAY	8																																					
WHITE	9																																					
<b>Answer Options</b>																																						
		Option A Blue, Black, Brown	Option B Blue, Black, Brown	Option C Brown, Blue, Black	Option D Violet, Blue, Brown																																	
<b>11</b>	<b>3_16 Science  2516</b>	Work and Energy	Which are the bulbs connected in series with each other and which are connected in parallel in the circuit shown here?	<table border="1"> <thead> <tr> <th></th> <th>Series</th> <th>Parallel</th> </tr> </thead> <tbody> <tr><td>A</td><td>1</td><td>2,3,4</td></tr> <tr><td>B</td><td>1,3</td><td>2,4</td></tr> <tr><td>C</td><td>3,4</td><td>1,2</td></tr> <tr><td>D</td><td>2</td><td>1,3,4</td></tr> </tbody> </table>		Series	Parallel	A	1	2,3,4	B	1,3	2,4	C	3,4	1,2	D	2	1,3,4	<b>B</b>																		
	Series	Parallel																																				
A	1	2,3,4																																				
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C	3,4	1,2																																				
D	2	1,3,4																																				

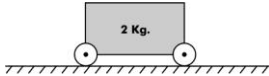
**Answer Options**

		Option A A	Option B B	Option C C	Option D D
<b>12</b>	<b>2_9 Science  6169</b>	Work and Energy	In the circuit given below, electricity will flow if there is a closed path from P to Q. Switches $S_2$ and $S_3$ will not allow electricity to flow if either is open. In which of these cases will current flow?		<b>A</b>

**Answer Options**

		Option A $S_1$ and $S_4$ are open; others are closed.	Option B $S_2$ and $S_4$ are open; others are closed.	Option C $S_1$ and $S_2$ are open; others are closed.	Option D $S_3$ and $S_4$ are open; others are closed.
<b>13</b>	<b>3_15 Science  3632</b>	Work and Energy	Nuclear power plants can produce energy more cheaply and with less pollution than thermal power plants. Why are there not more nuclear power plants than thermal power plants?		<b>D</b>

**Answer Options**

		Option A There is an endless supply of fossil fuels like coal available.	Option B Nuclear fuels produce too little heat during the nuclear fission reaction	Option C A kilogram of fossil fuel produces more energy than a kilogram of nuclear fuel.	Option D The issue of disposal of radioactive nuclear waste is not satisfactorily resolved.
<b>14</b>	<b>3_16</b>  <b>Science</b>  <b>2502</b>	WORK AND ENERGY	In the diagram below, a 20 Newton force is used to push a 2 kilogram toy cart a distance of 5 meters. The work done on the cart is _____		B

**Answer Options**

		Option A 40 J	Option B 100 J	Option C 150 J	Option D 200 J
<b>15</b>	<b>2_9</b>  <b>Science</b>  <b>5085</b>	WORK AND ENERGY	Which of these provides the energy for the motion of a petrol car?		<b>A</b>

**Answer Options**

		Option A  Petrol	Option B  Its battery	Option C  Its engine	Option D  Petrol and its battery
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## Question Paper

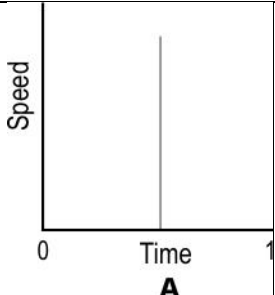
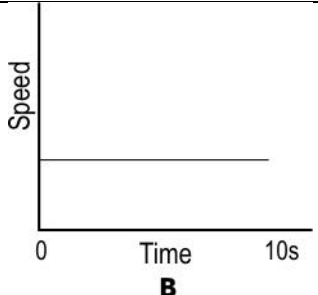
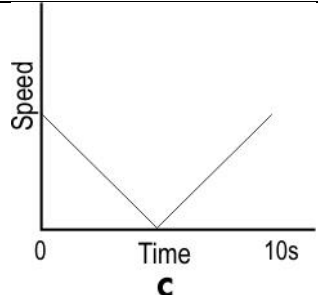
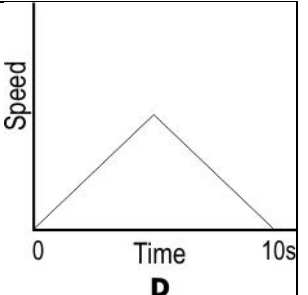

**Subject: Science**

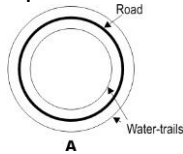
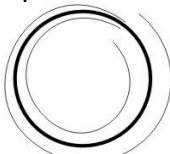
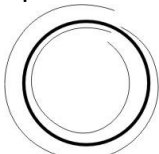
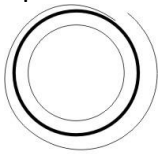
**Grade: 9<sup>th</sup>**

**Set-7**

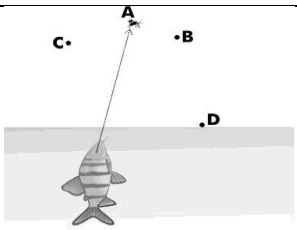
Q.N	Folder name & Question Code	Topic	Question with Answer Option	Image (If Any)	Correct Answer (Option-A,B,C,D)
1	2_9 Science 6158	MOTION	A ball is thrown vertically upwards, and then caught again after 10seconds.Which of these graphs shows how its SPEED changes during its motion?		C
<b>Answer Options</b>					
		Option A	Option B	Option C	Option D



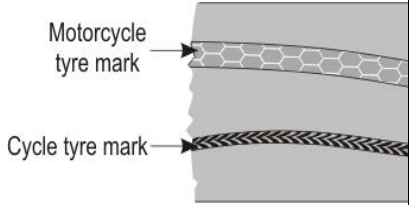
		 <p style="text-align: center;"><b>A</b></p>	 <p style="text-align: center;"><b>B</b></p>	 <p style="text-align: center;"><b>C</b></p>	 <p style="text-align: center;"><b>D</b></p>
<b>2</b>	<b>2_9</b>  <b>Science</b>  <b>5083</b>	MOTION	The rate of growth of hair on the human head has been estimated as about 0.44 mm per day. Assuming that this rate is uniform, about what LENGTH of hair (considering just 1 strand) would a normal male adult cut in 20 years?		<b>B</b>
<b>Answer Options</b>					
		Option A About 30 cm.	Option B About 3 m.	Option C About 30 m.	Option D About 300 m.
<b>3</b>	<b>3_16</b>  <b>Science</b>  <b>2539</b>	MOTION	A truck is carrying a water tank which has two taps on either side as shown in the figure. The taps are opened as the truck starts moving in the circular path at a constant speed. As the truck just completes the circle, the water in the tank runs out completely. What will be the shape of the water trail on the ground if seen from the top?		<b>B</b>
<b>Answer Options</b>					

		<p>Option A</p>  <p><b>A</b></p>	<p>Option B</p>  <p><b>B</b></p>	<p>Option C</p>  <p><b>C</b></p>	<p>Option D</p>  <p><b>D</b></p>
<b>4</b>	<b>2_9</b> <b>Science</b> <b>6133</b>	<b>MOTION</b>	<p>The unit of distance is metres. The unit of time is seconds. Hence the speed of a person who walks 100 metres in 50 seconds is 100m divided by 50 seconds which is 2 m/s or 2 metres per second. To find out the speed of gas moving through a large gas pipeline, an oil company measures that 10 kg of gas flows every 10 seconds. The mass flow rate is obtained by dividing the distance covered by the time taken to cover it. Then, the mass flow rate in the pipeline is expressed in the unit ---</p>		<b>B</b>

**Answer Options**

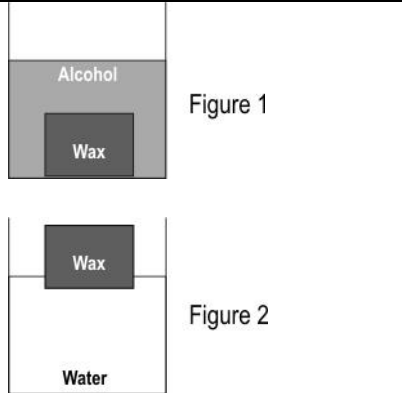
		<p>Option A m/s</p>	<p>Option B kg/s</p>	<p>Option C Kg/m</p>	<p>Option D s/kg</p>
<b>5</b>	<b>3_16</b> <b>Science</b> <b>2529</b>	<b>Force and laws of motion</b>	<p>Archer Fish are known to sight prey and then knock them off using a powerful jet of water. Where should the insect be for the Archer Fish to knock off the prey by using a powerful jet of water?</p>		

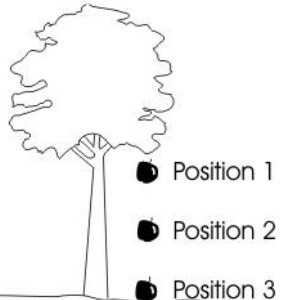
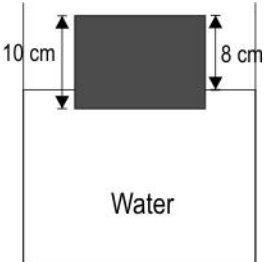
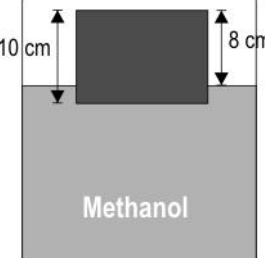
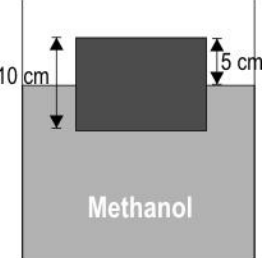
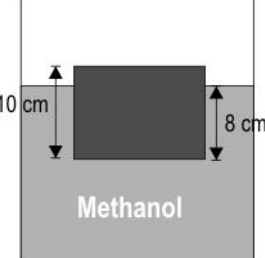
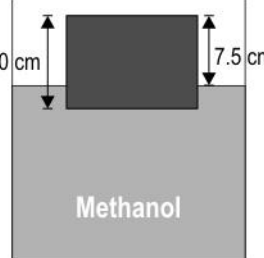
**Answer Options**

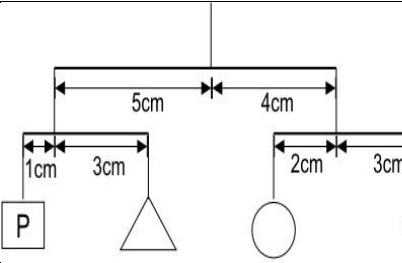
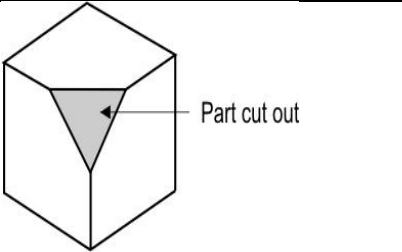
		Option A A	Option B B	Option C C	
<b>6</b>	<b>3_15</b>  <b>Science</b>  <b>3670</b>	Force and laws of motion	Tyre marks from a motorcycle and a bicycle are seen on a road. A square section of the road is made of concrete and does not display any marks. It is not possible for any vehicle to get off the road in the part shown .We can deduce WITH CERTAINTY:		

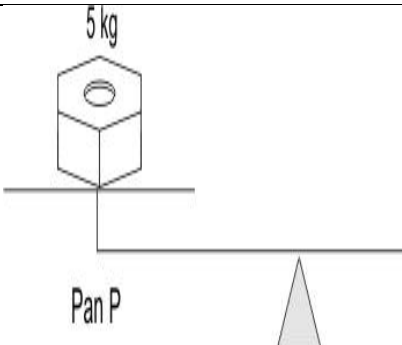
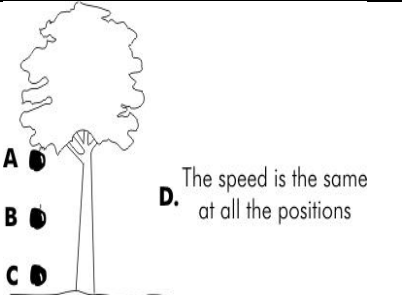
**Answer Options**

		Option A that the motorcycle passed before the cycle.	Option B that the cycle passed before the motorcycle .	Option C the cycle's direction of passing.	
<b>7</b>	<b>1_3</b> <b>Scienc</b> <b>e</b> <b>7342</b>	GRAVITATION Class -IX	A body has a mass of 2 kg. When will the mass of the body change?		<b>D</b>

		Option A When the body is taken to the moon.	Option B When the body is dropped from a height.	Option C When the body is being pulled along a smooth surface.	Option D The mass of the body will not change unless it is cut or broken.
8	1_3 Science 7360	GRAVITATION Class -IX	When a solid cube made of wax (density 0.9 g/cc) is placed in a beaker of alcohol (density 0.8 g/cc), it sinks (see figure 1). The same cube when placed in water (density 1g/cc), it floats (see figure 2). What will happen if the cube of wax is placed in vegetable oil (density 0.9 g/cc, almost the same as the wax itself)?	 <p>Figure 1</p> <p>Figure 2</p>	D
		Option A It will sink to the bottom (same as figure 1).	Option B It will float (same as figure 2).	Option C It is not possible that a solid and liquid have the same density.	Option D The solid will stay in the liquid at any point it is placed without sinking or floating.

9	1_3 Science 6681	GRAVITATION Class -IX	The drawing shows an apple falling to the ground. In which of the three positions does gravity act on the apple?		D
		Option A 2 only	Option B 1 and 2 only	Option C 1 and 3 only	Option D 1, 2, and 3
10	1_3 Science 6683	GRAVITATION Class -IX	The density of cork is 0.2 g/cc. A 10 cm tall cubical piece of cork floats on water (density: 1 g/cc) as shown. Which of the diagrams correctly represents the same piece of cork when placed in methanol whose density is 0.8g/cc?		D
		<p>Option A</p> 	<p>Option B</p> 	<p>Option C</p> 	<p>Option D</p> 

11	1_3 Scienc e 6684	GRAVITATION Class -IX	The 'mobile' shown is completely balanced. The sticks and strings are weightless. If the mass of P is 30 grams, what is the mass of Q?		A
		Option A 20g	Option B 30g	Option C 40g	Option D 60g
12	2_9 Scienc e 6054	GRAVITATION Class -IX	A block of wood is cut as shown in the figure. What will happen to its mass, volume and density?		D
		Option A Mass and density will remain the same but volume will decrease.	Option B Mass and volume will remain the same but density will decrease.	Option C Mass remains the same but density and volume will decrease.	Option D Density will remain the same but mass and volume will decrease.
13	2_9 Scienc e 6056	GRAVITATION Class -IX	Generally the density of a solid is higher than its liquid form. This is NOT true for:		B

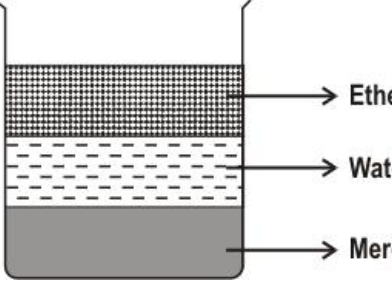
		Option A Wax	Option B Water	Option C Iron	Option D Sodium
<b>14</b>	<b>2_9 Science 6072</b>	GRAVITATION Class -IX	A beam is mounted on the fulcrum as shown. A 5 kg weight on pan P is balanced by placing a 2 kg weight on pan Q. Now a 2 kg weight is added to pan P. What must be added to Q to maintain the balance?		<b>A</b>
		Option A 0.8 kg	Option B 1.2kg	Option C 2 kg	Option D 5 kg
<b>15</b>	<b>2_9 Science 5004</b>	GRAVITATION Class -IX	An apple is falling from a tree. At which of the points shown is its speed the highest?		<b>C</b>
		Option A A	Option B B	Option C C	Option D D

## Question Paper

**Subject: Science**


**Grade: 9<sup>th</sup>**

**Set-8**

Q.N	Folder name & Question Code	Topic	Question with Answer Option	Image (If Any)	Correct Answer (Option-A,B,C,D)
<b>1</b>	<b>2_10 Science 4156</b>	GRAVITATION <span style="color: red;">Class -IX</span>	Ether (density 0.71 g/cc), water (density 1.00 g/cc) and mercury (density 13.6 g/cc) are 3 liquids which do not mix with each other. They are filled in a container as shown here. A piece of diamond (density 3.5 g/cc) is dropped into the liquid. Where will it come to rest?		<b>C</b>
<b>Answer Options</b>					
		Option A In the ether layer.	Option B In the water layer.	Option C Between the water and the	Option D In the mercury layer



				mercury layers.	(it will sink to the bottom).
<b>2</b>	<b>2_10 Science 4157</b>	GRAVITATION Class -IX	A paper and a stone are dropped from the top of a building. Which one will reach the ground first and why?		<b>B</b>
<b>Answer Options</b>					
		Option A The stone, because it is heavier (air resistance plays no part.)	Option B The stone, only because it faces much less air resistance.	Option C The paper, because it is lighter (air resistance plays no part.)	Option D The paper, only because it faces much less air resistance.
<b>3</b>	<b>2_9 Science 5061</b>	Work and Energy	When Ram was about to switch on the light in his room, his sister stopped him. She told him that he should first DRY his hands (which were wet), before touching the electric switch.(Was Ram's sister correct? )Why / why not?		<b>C</b>
<b>Answer Options</b>					
		Option A Yes. The water can cause a short circuit (There is no increased danger to Ram)	Option B No. We should be careful in any case - dry or wet makes no difference.	Option C Yes. Wetness reduces body resistance and increases danger of shock.	Option D No. Water is a poor conductor of electricity, hence wet fingers are safer.
<b>4</b>	<b>3_16 Science</b>	WORK ENERGY AND POWER	The architect of a multiplex is advising the owners to fit Compact Fluorescent Lamps (CFL) in place of regular lamps where they will		<b>C</b>

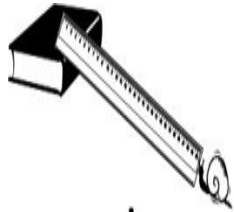



2518			be kept on for over 18 hours every day. What could be the reason for this?		
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**Answer Options**

		<p>Option A The wattage of CFL Lamps is higher and hence they give brighter light.</p>	<p>Option B CFL Lamps give white light which is not possible with other lamps.</p>	<p>Option C CFL Lamps use less energy and savings can be high with high usage.</p>	<p>Option D CFL Lamps are priced much lower than regular lamps.</p>
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5	<b>1_3 SCIENC E 6669</b>	<b>WORK &amp; ENERGY Class-IX</b>	In the pictures below, which snail does the least amount of work? (The same scale is used in all the pictures.)	No image	
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**Answer Options**

		<p>Option A</p>  <p style="text-align: center;">A</p>	<p>Option B</p>  <p style="text-align: center;">B</p>	<p>Option C</p>  <p style="text-align: center;">C</p>	<p>Option D</p>  <p style="text-align: center;">D</p>
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6	<b>1_3 SCIENC E 6642</b>	WORK & ENERGY Class-IX	One form of energy can be converted into other forms. An aerial fire cracker was lit on the ground. It rose up to burst and produce beautiful patterns in the sky. Here chemical energy stored in the cracker is converted mainly into _____.	No image	<b>C</b>
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**Answer Options**


		Option A Sound energy only	Option B Sound and light energy only	Option C Sound, light and mechanical energy	Option D Mechanical energy only
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7	<b>2_9 SCIENC E 6041</b>	WORK & ENERGY Class-IX	What energy conversion takes place when a TV is switched on for a long period of time?	No image	<b>B</b>
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**Answer Options**

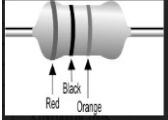
		Option A Electrical energy to light and sound energy only.	Option B Electrical energy to light, heat and sound energy.	Option C Electrical energy to mechanical energy only.	Option D Electrical energy to light energy only.
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8	2_9 SCIENC E 5002	WORK & ENERGY Class-IX	<p>Sonu and Monu are performing an activity on bouncing balls. They drop a normal tennis ball from different heights (DROP HEIGHT) and record how high the ball bounces (BOUNCE HEIGHT). This is what they have recorded. Study it carefully and answer question.</p> <p>If the ball is dropped from a height of 60 cm, it is likely to bounce back to a height of about:</p>	<p><i>Finding the Bounce Height - by Sonu and Monu - done</i></p> <p>Ball type: Tennis Ball</p> <table border="1" data-bbox="1276 418 1524 1182"> <thead> <tr> <th>Drop height (cm)</th> <th>Bounce height (cm)</th> </tr> </thead> <tbody> <tr> <td rowspan="3">40</td> <td>Trial 1. 21</td> </tr> <tr> <td>Trial 2. 22</td> </tr> <tr> <td>Trial 3. 22</td> </tr> <tr> <td rowspan="3">80</td> <td>Trial 1. 44</td> </tr> <tr> <td>Trial 2. 43</td> </tr> <tr> <td>Trial 3. 44</td> </tr> <tr> <td rowspan="3">100</td> <td>Trial 1. 52</td> </tr> <tr> <td>Trial 2. 53</td> </tr> <tr> <td>Trial 3. 52</td> </tr> </tbody> </table>	Drop height (cm)	Bounce height (cm)	40	Trial 1. 21	Trial 2. 22	Trial 3. 22	80	Trial 1. 44	Trial 2. 43	Trial 3. 44	100	Trial 1. 52	Trial 2. 53	Trial 3. 52	B
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	Trial 3. 44																		
100	Trial 1. 52																		
	Trial 2. 53																		
	Trial 3. 52																		
<b>Answer Options</b>																			
		Option A 20 cm.	Option B 30 cm.	Option C 42 cm.	Option D 120 cm														

9	2_9 SCIENC E 5003	WORK & ENERGY Class-IX	<p>Sonu and Monu are performing an activity on bouncing balls. They drop a normal tennis ball from different heights (DROP HEIGHT) and record how high the ball bounces (BOUNCE HEIGHT). This is what they have recorded. Study it carefully and answer question.</p> <p>Which of these questions can Sonu and Monu answer based on their experiment?</p>	<p><i>Finding the Bounce Height - by Sonu and Monu - done on A</i></p> <p>Ball type: Tennis Ball</p> <table border="1" data-bbox="1276 407 1507 1138"> <thead> <tr> <th>Drop height (cm)</th> <th>Bounce height (cm)</th> </tr> </thead> <tbody> <tr> <td rowspan="3">40</td> <td>Trial 1. 21</td> </tr> <tr> <td>Trial 2. 22</td> </tr> <tr> <td>Trial 3. 22</td> </tr> <tr> <td rowspan="3">80</td> <td>Trial 1. 44</td> </tr> <tr> <td>Trial 2. 43</td> </tr> <tr> <td>Trial 3. 44</td> </tr> <tr> <td rowspan="3">100</td> <td>Trial 1. 52</td> </tr> <tr> <td>Trial 2. 53</td> </tr> <tr> <td>Trial 3. 52</td> </tr> </tbody> </table> 	Drop height (cm)	Bounce height (cm)	40	Trial 1. 21	Trial 2. 22	Trial 3. 22	80	Trial 1. 44	Trial 2. 43	Trial 3. 44	100	Trial 1. 52	Trial 2. 53	Trial 3. 52	B
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**Answer Options**

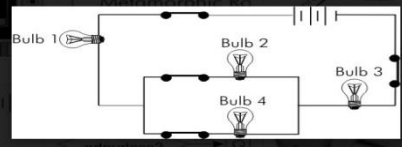
		<p>Option A Does the bounce height depend on the type of the</p>	<p>Option B How does the bounce height change when the drop height changes?</p>	<p>Option C Does the size of the ball affect the bounce height?</p>	<p>Option D Does the nature of the floor influence the bounce height?</p>
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		ball?																																															
<b>10</b>	<b>2_9 Science 5062</b>	Work and Energy	Resistors are semi-conductor devices which are important components of electronic circuits. Resistance is measured in OHMS, and each resistor has a rating in ohms. Because a resistor is small and may be fixed in any orientation, its resistance value is coded on it using coloured bands rather than writing its resistance value on it. A colour code is used to determine the value of a resistor as per this table. What is the resistance of the resistor shown here?	 <table border="1" data-bbox="1402 354 1583 500"> <thead> <tr> <th>1st and 2nd Colour Band</th> <th>Digit Represented</th> <th>Multiplier</th> <th>Value</th> </tr> </thead> <tbody> <tr> <td>BLACK</td> <td>0</td> <td>X1</td> <td></td> </tr> <tr> <td>BROWN</td> <td>1</td> <td>X10</td> <td></td> </tr> <tr> <td>RED</td> <td>2</td> <td>X100</td> <td></td> </tr> <tr> <td>ORANGE</td> <td>3</td> <td>X1,000 or 1K</td> <td></td> </tr> <tr> <td>YELLOW</td> <td>4</td> <td>X10,000 or 10K</td> <td></td> </tr> <tr> <td>GREEN</td> <td>5</td> <td>X100,000 or 100K</td> <td></td> </tr> <tr> <td>BLUE</td> <td>6</td> <td>X1,000,000 or 1M</td> <td></td> </tr> <tr> <td>VIOLET</td> <td>7</td> <td></td> <td></td> </tr> <tr> <td>GRAY</td> <td>8</td> <td></td> <td></td> </tr> <tr> <td>WHITE</td> <td>9</td> <td></td> <td></td> </tr> </tbody> </table>	1st and 2nd Colour Band	Digit Represented	Multiplier	Value	BLACK	0	X1		BROWN	1	X10		RED	2	X100		ORANGE	3	X1,000 or 1K		YELLOW	4	X10,000 or 10K		GREEN	5	X100,000 or 100K		BLUE	6	X1,000,000 or 1M		VIOLET	7			GRAY	8			WHITE	9			<b>D</b>
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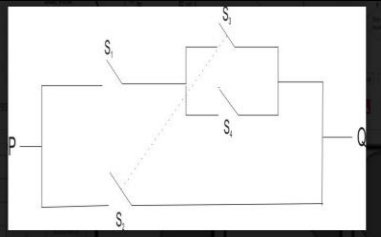
**Answer Options**

		Option A 1000 ohms	Option B 20 ohms	Option C 2000 ohms	Option D 20000 ohms																																	
<b>11</b>	<b>2_9 Science 5063</b>	Work and Energy	Resistors are semi-conductor devices which are important components of electronic circuits. Resistance is measured in OHMS, and each resistor has a rating in ohms. Because a resistor is small and may be fixed in any orientation, its resistance value is coded on it using coloured bands rather than writing its resistance value on it. A colour code is used to determine the value of a resistor as per this table. Which three colour bands represent 600 ohms?	<table border="1" data-bbox="1222 980 1465 1273"> <thead> <tr> <th>1st and 2nd Colour Band</th> <th>Digit Represented</th> <th>Multiplier</th> </tr> </thead> <tbody> <tr> <td>BLACK</td> <td>0</td> <td>X1</td> </tr> <tr> <td>BROWN</td> <td>1</td> <td>X10</td> </tr> <tr> <td>RED</td> <td>2</td> <td>X100</td> </tr> <tr> <td>ORANGE</td> <td>3</td> <td>X1,000 or 1K</td> </tr> <tr> <td>YELLOW</td> <td>4</td> <td>X10,000 or 10K</td> </tr> <tr> <td>GREEN</td> <td>5</td> <td>X100,000 or 100K</td> </tr> <tr> <td>BLUE</td> <td>6</td> <td>X1,000,000 or 1M</td> </tr> <tr> <td>VIOLET</td> <td>7</td> <td></td> </tr> <tr> <td>GRAY</td> <td>8</td> <td></td> </tr> <tr> <td>WHITE</td> <td>9</td> <td></td> </tr> </tbody> </table> <div data-bbox="1472 1003 1619 1149" style="border: 1px solid black; padding: 5px;"> <p>How to use:</p> <p>The first two bands represent 2 digits as per the 'Represented' column.</p> <p>The third band represents the multiplier as per 'Multiplier' column.</p> <p>Eg. Brown, Black, Black represents 10 x 1 = 10</p> </div>	1st and 2nd Colour Band	Digit Represented	Multiplier	BLACK	0	X1	BROWN	1	X10	RED	2	X100	ORANGE	3	X1,000 or 1K	YELLOW	4	X10,000 or 10K	GREEN	5	X100,000 or 100K	BLUE	6	X1,000,000 or 1M	VIOLET	7		GRAY	8		WHITE	9		<b>A</b>
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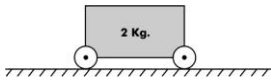
**Answer Options**

		Option A Blue, Black, Brown	Option B Blue, Black, Brown	Option C Brown, Blue, Black	Option D Violet, Blue, Brown															
<b>12</b>	<b>3_16 Science  2516</b>	Work and Energy	Which are the bulbs connected in series with each other and which are connected in parallel in the circuit shown here?	 <table border="1" data-bbox="1213 571 1612 734"> <thead> <tr> <th></th> <th>Series</th> <th>Parallel</th> </tr> </thead> <tbody> <tr> <td>A</td> <td>1</td> <td>2,3,4</td> </tr> <tr> <td>B</td> <td>1,3</td> <td>2,4</td> </tr> <tr> <td>C</td> <td>3,4</td> <td>1,2</td> </tr> <tr> <td>D</td> <td>2</td> <td>1,3,4</td> </tr> </tbody> </table>		Series	Parallel	A	1	2,3,4	B	1,3	2,4	C	3,4	1,2	D	2	1,3,4	<b>B</b>
	Series	Parallel																		
A	1	2,3,4																		
B	1,3	2,4																		
C	3,4	1,2																		
D	2	1,3,4																		

**Answer Options**

		Option A A	Option B B	Option C C	Option D D
<b>13</b>	<b>2_9 Science  6169</b>	Work and Energy	In the circuit given below, electricity will flow if there is a closed path from P to Q. Switches $S_2$ and $S_3$ will not allow electricity to flow if either is open. In which of these cases will current flow?		<b>A</b>

**Answer Options**

		Option A S <sub>1</sub> and S <sub>4</sub> are open; others are closed.	Option B S <sub>2</sub> and S <sub>4</sub> are open; others are closed.	Option C S <sub>1</sub> and S <sub>2</sub> are open; others are closed.	Option D S <sub>3</sub> and S <sub>4</sub> are open; others are closed.
<b>14</b>	<b>3_15 Science  3632</b>	Work and Energy	Nuclear power plants can produce energy more cheaply and with less pollution than thermal power plants. Why are there not more nuclear power plants than thermal power plants?		D
<b>Answer Options</b>					
		Option A There is an endless supply of fossil fuels like coal available.	Option B Nuclear fuels produce too little heat during the nuclear fission reaction	Option C A kilogram of fossil fuel produces more energy than a kilogram of nuclear fuel.	Option D The issue of disposal of radioactive nuclear waste is not satisfactorily resolved.
<b>15</b>	<b>3_16 Science  2502</b>	WORK AND ENERGY	In the diagram below, a 20 Newton force is used to push a 2 kilogram toy cart a distance of 5 meters. The work done on the cart is _____	 <p>The diagram shows a rectangular toy cart with two wheels on a horizontal surface. The cart is labeled '2 Kg.' and is positioned on a surface indicated by diagonal hatching below it.</p>	B
<b>Answer Options</b>					



		Option A 40 J	Option B 100 J	Option C 150 J	Option D 200 J
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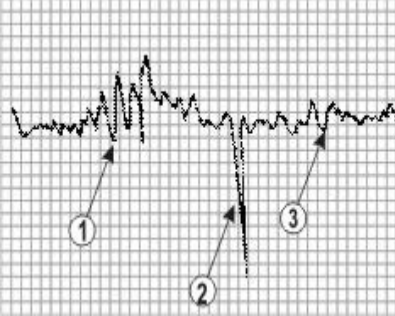
## Question Paper

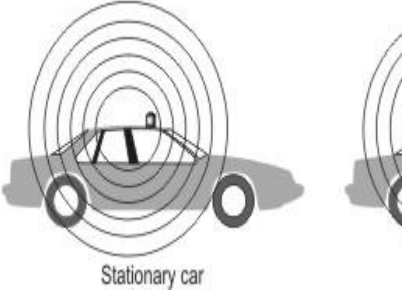
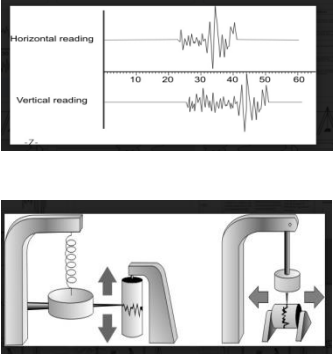
**Subject: Science**

**Grade: 9<sup>th</sup>**

**Set-9**

Q.N	Folder name & Question Code	Topic	Question with Answer Option	Image (If Any)	Correct Answer (Option-A,B,C,D)
1	2_9 Science 5085	WORK AND ENERGY	Which of these provides the energy for the motion of a petrol car?		A
<b>Answer Options</b>					
		Option A Petrol	Option B Its battery	Option C Its engine	Option D Petrol and its battery

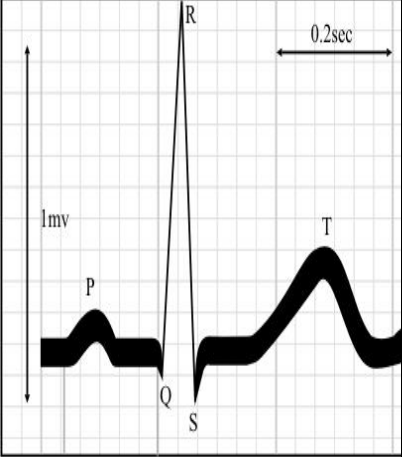
2	4_25  Science 11739	Sound	Study a sample polygraph output shown here. The person undergoing the test was asked six questions. The questions and answers are as shown below. It is known that the person answered question 1 truthfully. Assuming the polygraph result is valid, what conclusion can be reached?	 <table border="1" data-bbox="1220 548 1619 873"> <thead> <tr> <th colspan="2">Transcript</th> </tr> <tr> <th>Q. No.</th> <th>Question</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>What is your name?</td> </tr> <tr> <td>2</td> <td>Where were you at 3pm last Sunday</td> </tr> <tr> <td>3</td> <td>Did you steal the jewels from the Go</td> </tr> <tr> <td>4</td> <td>Do you know David who was caught</td> </tr> <tr> <td>5</td> <td>Do you know where the stolen jewell</td> </tr> <tr> <td>6</td> <td>How did you get the bandage in your</td> </tr> </tbody> </table>	Transcript		Q. No.	Question	1	What is your name?	2	Where were you at 3pm last Sunday	3	Did you steal the jewels from the Go	4	Do you know David who was caught	5	Do you know where the stolen jewell	6	How did you get the bandage in your	B
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<b>Answer Options</b>																					
		<p><b>Option A</b></p> <p>John Smith is definitely guilty of robbing Gold Jewellers and has the stolen jewellery.</p>	<p><b>Option B</b></p> <p>John Smith may not have actually robbed Gold Jewellers, but may have been involved.</p>	<p><b>Option C</b></p> <p>John Smith was at the Gold Jewellers store with David when the robbery occurred.</p>	<p><b>Option D</b></p> <p>John Smith is completely innocent and is not connected in any way with the robbery.</p>																

3	4_25 Science 11680	Sound	The diagrammatic representation of the sound wave given out by a siren of a security vehicle is shown below when the vehicle is STATIONARY, MOVING SLOWLY and MOVING FAST. As the vehicle APPROACHES an observer, in which of these ways will the sound heard change?		B
<b>Answer Options</b>					
		<b>Option A</b> Its volume will decrease.	<b>Option B</b> Its pitch will increase.	<b>Option C</b> Its frequency will decrease.	<b>Option D</b> There will be no change in the sound heard.
4	2_9 Science 5074	Sound  *(more suitable when mapped to class VIII some natural phenomenon)	Study the principle of functioning of a seismograph shown in the diagram below. Seismographs are used to detect earthquakes and measure their intensities. The seismograph shown detects horizontal and vertical vibrations. The recordings made on both drums during an earthquake are shown below. How long did the quake last?		C
<b>Answer Options</b>					
		Option A 3 seconds	Option B 20 seconds	Option C 28 seconds	Option D 44 seconds

5	2_9 Science 6165	SOUND	Which of these does NOT use radio waves?		D
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**Answer Options**

		Option A FM radio	Option B Mobile telephone	Option C Television	Option D Camera
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6	2_9 Science 5068	SOUND	<p>The human heart beat can be recorded electrically, to detect any abnormalities in its functioning. The graph obtained is called an ELECTROCARDIOGRAM (ECG). Study the elements of a normal ECG shown below and answer the question.</p> <p>(1) P wave. The P wave is generated by the contraction of the upper chambers of the heart.(2). QRS complex. Contraction of the lower chambers of the heart generates the QRS wave complex.(3). T wave. The T wave is generated by the relaxation of the lower chambers of the heart. The entire cycle from one P wave to the next is one heartbeat. Based on the above normal ECG, estimate the normal heart beat rate in humans in beats per minute (bpm).</p>		C
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**Answer Options**

		Option A 1 - 5 bpm	Option B 5 - 50 bpm	Option C 60 - 100 bpm	Option D 100 - 200 bpm
<b>7</b>	<b>2_9 Science 5069</b>	SOUND	The human heart beat can be recorded electrically, to detect any abnormalities in its functioning. The graph obtained is called an ELECTROCARDIOGRAM (ECG). Study the elements of a normal ECG shown below and Identify the normal ECG from the four shown below	 	<b>D</b>

**Answer Options**

		Option A A	Option B B	Option C C	Option D D
<b>8</b>	<b>2_9 Science 5070</b>	SOUND	The human heart beat can be recorded electrically, to detect any abnormalities in its functioning. The graph obtained is called an ELECTROCARDIOGRAM (ECG). Study the elements of a normal ECG shown .Under which of these conditions is the ECG likely NOT to change?		<b>C</b>

**Answer Options**

		Option A If the ECG is recorded immediately after strenuous exercise.	Option B If the ECG is recorded while a person is having high fever	Option C If the ECG is recorded immediately after a person wakes up.	Option D If the ECG is recorded soon after a heart surgery.
9	2_9 Science 5058	SOUND	Most television sets these days can be operated through a REMOTE CONTROL. How do most 'remotes' communicate with TV sets?		B
<b>Answer Options</b>					
		Option A Using radio waves	Option B Using infra-red rays	Option C Using ultra-violet rays	Option D Using microwaves
10	2_9 Science 6164	Sound	Search for Extra-Terrestrial Intelligence (SETI) is the name of a project which is constantly monitoring electromagnetic waves being received from space. Many heavenly bodies also emit electromagnetic signals but these follow simple, regular patterns. If SETI detected the following patterns, which one of them is likely to be from intelligent aliens?		C
<b>Answer Options</b>					
		Option A 5, 10, 15, 20...	Option B 125, 100, 75, 50, 25...	Option C 5, 7, 11, 13, 17...	Option D 8, 8, 8, 8, 8

<b>11</b>	<b>3_15 Science 3671</b>	Why Do We Fall Ill?	It is likely that when a person sweats, his body's electrical resistance-----.	<p>Read the details about the Lie Detector machine and answer the question.(A polygraph or a lie detector is based on the principle that when a person is 'stressed' (as happens when most people tell a lie) the person's involuntary nervous system reacts to that stress by doing a series of things including increasing the respiration, heart rate, and perspiration. Most Lie Detectors measure the amount of perspiration on a person's skin using a pair of electrodes and displaying the result on a meter. The meter movement is proportional to the amount of perspiration on the skin. Devices which measure this perspiration are also called psychogalvanometers or galvanic skin response (GSR) meters.</p>	<b>C</b>
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**Answer Options**

		Option A stays the same.	Option B increases	Option C decreases.	Option D becomes zero.
<b>12</b>	<b>3_15 Science 3647</b>	Why do we fall ill?	We wish to test if a certain vaccine developed for a disease is effective or not. What is the best way to do this?		<b>C</b>

**Answer Options**

		Option A Vaccinate 100 animals and expose all 100 to the disease.	Option B Vaccinate 100 animals and expose 50 of them to the disease.	Option C Vaccinate 50 animals, do not vaccinate 50 other animals, and expose all 100 to the disease.	Option D Vaccinate 50 animals, do not vaccinate 50 other animals, and expose the vaccinated animals to the disease				
<b>13</b>	<b>3_17 Science 1829</b>	Why do we fall ill?	To which of the cells shown below does the disease TETANUS belong?	<p align="center">Bact</p> <table border="1"> <tr> <td>Vaccination available</td> <td><b>A</b></td> </tr> <tr> <td>Vaccination not available</td> <td><b>C</b></td> </tr> </table>	Vaccination available	<b>A</b>	Vaccination not available	<b>C</b>	<b>A</b>
Vaccination available	<b>A</b>								
Vaccination not available	<b>C</b>								

**Answer Options**

		<b>Option A</b> A	<b>Option B</b> B	<b>Option C</b> C	<b>Option D</b> D
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14	4_23 Science 9128	Why do we fall ill?	Microorganisms causing diseases like tuberculosis (TB) sometimes develop resistance to the drug due to their exposure to the drugs. Which of these could contribute to this resistance?		A						
<b>Answer Options</b>											
		<b>Option A</b> Patients not completing the treatment but stopping the course once they feel better.	<b>Option B</b> Patients not beginning the prescribed treatment at all for different reasons.	<b>Option C</b> Patients continuing the treatment beyond the prescribed period of medication.	<b>Option D</b> Patients following doctors' advice and continuing the treatment exactly as instructed.						
15	4_24 Science 10388	Why do we fall ill?	From the description above, we can guess that a placebo is _____	<table border="1"> <thead> <tr> <th>Type of treatment</th> <th>Incidence of cold per person</th> </tr> </thead> <tbody> <tr> <td>Group that received vitamin C dosage</td> <td>0.38</td> </tr> <tr> <td>Group that received placebo dosage</td> <td>0.37</td> </tr> </tbody> </table>	Type of treatment	Incidence of cold per person	Group that received vitamin C dosage	0.38	Group that received placebo dosage	0.37	C
Type of treatment	Incidence of cold per person										
Group that received vitamin C dosage	0.38										
Group that received placebo dosage	0.37										
<b>Answer Options</b>											
		<b>Option A</b> Simply another name for an identical vitamin C tablet.	<b>Option B</b> a vitamin C tablet but which looks different (in colour and size)	<b>Option C</b> Something that looks like a vitamin C tablet but has no medicinal value.	<b>Option D</b> a tablet containing chemicals to cure the common cold, but not vitamin C.						

## Question Paper

**Subject: Science**

**Grade: 9<sup>th</sup>**

**Set-10**

Q.N	Folder name & Question Code	Topic	Question with Answer Option	Image (If Any)	Correct Answer (Option-A,B,C,D)
1	4_24 Science 10389	Why do we fall ill?	What conclusion can be drawn about the relation between the intake of vitamin C and the occurrence of common colds?		B
<b>Answer Options</b>					
		<b>Option A</b> Regular intake of vitamin C reduces the occurrence of colds.	<b>Option B</b> Regular intake of vitamin C did not affect the occurrence of colds.	<b>Option C</b> Regular intake of vitamin C increases the occurrence of colds.	<b>Option D</b> Regular intake of vitamin C first increases, then decreases the occurrence of colds.

2	4_25 Science 11685	Why do we fall ill?	To which of the cells shown below does the disease TETANUS belong?		A
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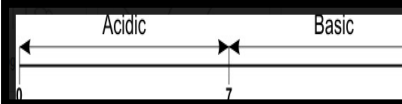
**Answer Options**

		<p style="text-align: center;"><b>Option A</b></p> <table border="1"> <tr> <td></td> <td style="text-align: center;">Bacteria</td> </tr> <tr> <td>Vaccination available</td> <td style="text-align: center;"><b>A</b></td> </tr> <tr> <td>Vaccination not available</td> <td style="text-align: center;"><b>C</b></td> </tr> </table>		Bacteria	Vaccination available	<b>A</b>	Vaccination not available	<b>C</b>	<p style="text-align: center;"><b>Option B</b></p> <table border="1"> <tr> <td></td> <td style="text-align: center;">Bacteria</td> <td style="text-align: center;">Virus</td> </tr> <tr> <td>Vaccination available</td> <td style="text-align: center;"><b>A</b></td> <td style="text-align: center;"><b>B</b></td> </tr> <tr> <td>Vaccination not available</td> <td style="text-align: center;"><b>C</b></td> <td style="text-align: center;"><b>D</b></td> </tr> </table>		Bacteria	Virus	Vaccination available	<b>A</b>	<b>B</b>	Vaccination not available	<b>C</b>	<b>D</b>	<p style="text-align: center;"><b>Option C</b></p> <table border="1"> <tr> <td></td> <td style="text-align: center;">Bacteria</td> <td style="text-align: center;">Virus</td> </tr> <tr> <td>Vaccination available</td> <td style="text-align: center;"><b>A</b></td> <td style="text-align: center;"><b>B</b></td> </tr> <tr> <td>Vaccination not available</td> <td style="text-align: center;"><b>C</b></td> <td style="text-align: center;"><b>D</b></td> </tr> </table>		Bacteria	Virus	Vaccination available	<b>A</b>	<b>B</b>	Vaccination not available	<b>C</b>	<b>D</b>	<p style="text-align: center;"><b>Option D</b></p> <table border="1"> <tr> <td></td> <td style="text-align: center;">Bacteria</td> <td style="text-align: center;">Virus</td> </tr> <tr> <td>Vaccination available</td> <td style="text-align: center;"><b>A</b></td> <td style="text-align: center;"><b>B</b></td> </tr> <tr> <td>Vaccination not available</td> <td style="text-align: center;"><b>C</b></td> <td style="text-align: center;"><b>D</b></td> </tr> </table>		Bacteria	Virus	Vaccination available	<b>A</b>	<b>B</b>	Vaccination not available	<b>C</b>	<b>D</b>
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Vaccination not available	<b>C</b>	<b>D</b>																																				

3	4_25 Science 11743	Why do we fall ill?	We wish to test if a certain vaccine developed for a disease is effective or not. What is the best way to do this?		C
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**Answer Options**

		<p style="text-align: center;"><b>Option A</b></p> <p>Vaccinate 100 animals and expose all 100 to the disease.</p>	<p style="text-align: center;"><b>Option B</b></p> <p>Vaccinate 100 animals and expose 50 of them to the disease.</p>	<p style="text-align: center;"><b>Option C</b></p> <p>Vaccinate 50 animals, do not vaccinate 50 other animals, and expose all 100 to the disease.</p>	<p style="text-align: center;"><b>Option D</b></p> <p>Vaccinate 50 animals, do not vaccinate 50 other animals, and expose</p>
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					the vaccinated animals to the disease.
4	4_25 Science 11806	Why do we fall ill?	What are vitamins?		A
<b>Answer Options</b>					
		<b>Option A</b> Substances required in small amounts for normal body growth and activity.	<b>Option B</b> Substances that serve as a major energy source in the diets of animals.	<b>Option C</b> Complex biological molecules which are the 'building blocks of life'.	<b>Option D</b> Inorganic elements that are essential to the nutrition of animals and plants.
5	2_9 Science 5086	Why do we fall ill?	The pH of a substance is a measure of its acidity as shown in the scale .When Suresh complained of acidity, his doctor prescribed a liquid antacid which gave him relief. Which of these could be the pH of the antacid?		D
<b>Answer Options</b>					
		Option A 0	Option B 3	Option C 7	Option D 9

6	2_9 Science  5053	Why do we fall ill?	<p>Read the following statements:(1.) The mould may be producing a substance that kills the bacteria.(2.) As the black circular disk moved across the sun, the sky grew darker.</p> <p>(3. )Hydrogen gas will be released if a piece of Zinc is dropped in this liquid.(4. )When 2 objects are dropped together, they will reach the ground at the same time.</p> <p>Which row correctly identifies the statements above?</p>	<table border="1"> <tr> <td></td> <td>1</td> <td>2</td> <td>3</td> <td>4</td> </tr> <tr> <td>A.</td> <td>Hypothesis</td> <td>Observation</td> <td>Prediction</td> <td>Concl</td> </tr> <tr> <td>B.</td> <td>Prediction</td> <td>Observation</td> <td>Conclusion</td> <td>Hypot</td> </tr> <tr> <td>C.</td> <td>Observation</td> <td>Conclusion</td> <td>Hypothesis</td> <td>Predic</td> </tr> <tr> <td>D.</td> <td>Conclusion</td> <td>Hypothesis</td> <td>Observation</td> <td>Predic</td> </tr> </table>		1	2	3	4	A.	Hypothesis	Observation	Prediction	Concl	B.	Prediction	Observation	Conclusion	Hypot	C.	Observation	Conclusion	Hypothesis	Predic	D.	Conclusion	Hypothesis	Observation	Predic	A
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C.	Observation	Conclusion	Hypothesis	Predic																										
D.	Conclusion	Hypothesis	Observation	Predic																										

**Answer Options**

		Option A A	Option B B	Option C C	Option D D
7	4_23 Science 9126	WHY DO WE FALL ILL	Which of the following diseases is spread by both contaminated food and contaminated water?		D

**Answer Options**


		<b>Option A</b> Common cold	<b>Option B</b> Chicken pox	<b>Option C</b> Rabies	<b>Option D</b> Typhoid
8	3_15 Science 3646	Why do we fall ill?	You read a newspaper report that a food product you consume regularly contains pesticides which can cause cancer in the		C

			long term. What would be the scientific thing to do at this stage?		
<b>Answer Options</b>					
		Option A Ignore the report - anyway the effects are very long term.	Option B Stop consuming the product with immediate effect.	Option C Obtain more details about the tests and try to understand them.	Option D Discuss the issue widely with your friends and share your fears.
<b>9</b>	<b>2_9 Science 6152</b>	Why do we fall ill?	Viruses are responsible for causing many diseases. Among the following, which is NOT true about viruses?		<b>C</b>
<b>Answer Options</b>					
<b>10</b>		Option A They can only multiply inside another host organism.	Option B They are not visible to the naked eye.	Option C They belong to the amoeba family.	Option D They exhibit a variety of structures.
	<b>2_9 Science 5051</b>	Why do we fall ill?	Ramesh buys a packet of pasteurized milk from the market. Ramesh then boils the milk and drinks it. Why does Ramesh boil the milk before drinking it?		<b>D</b>

**Answer Options**

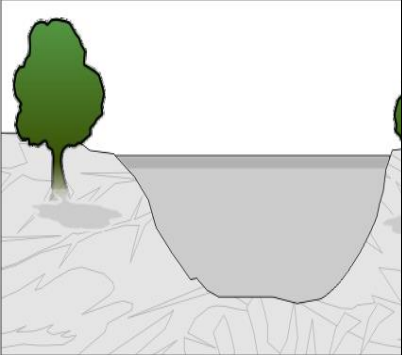
		Option A Boiling kills the germs and bacteria in the milk.	Option B Boiling improves the taste of the milk.	Option C Boiling makes the milk more nutritious.	Option D There is no advantage - it is more out of habit.
<b>11</b>	<b>3_16 Science  2498</b>	Why do we fall ill?	When people fall ill, their immune system fights the disease and tries to restore the person to good health. Which disease is known to attack the human immune system leaving the body susceptible to various kinds of infection?		<b>D</b>

**Answer Options**

		Option A Chicken Pox	Option B Pneumonia	Option C Tuberculosis	Option D AIDS
<b>12</b>	<b>3_16 Science  2534</b>	Why do we fall ill?	Paracetamol tablets are given by doctors to reduce fever in patients. According to this label found on the tablets, the <b>MAXIMUM</b> amount of Paracetamol that a patient can be given IN 24 HOURS is	 <p><b>Paracetamol Tablets</b>          Each uncoated tablet contains: Paracetamol I.P 500mg  <b>Indication:</b> For symptomatic relief from mild to moderate pain  <b>Dosage:</b> 1 to 2 tablets 3 to 4 times in any 24 hour period or as directed          Maximum dose in 24 hours: 8 tablets in equally divided doses          Not suitable for children under 12 years.</p>	<b>D</b>

**Answer Options**



		Option A 500 mg	Option B 1000 mg	Option C 2000 mg	Option D 4000 mg
13	4_23 Science 9137	Natural Resources	What is the appropriate name of the sediment that can pass through mesh number 5 BUT cannot pass through mesh number 10?		C
<b>Answer Options</b>					
		<b>Option A</b> Small cobble	<b>Option B</b> Coarse gravel	<b>Option C</b> Very fine gravel	<b>Option D</b> Fine sand
14	4_23 Science 9141	Natural Resources	The cross section of a lake is shown below. Its surface is frozen. Which of these statements is likely to be MOST accurate about the temperature at the bottom of the lake?		B
<b>Answer Options</b>					

		<b>Option A</b> It will definitely be 0&deg;C or lower.	<b>Option B</b> It will definitely be 4&deg;C or lower.	<b>Option C</b> It will definitely be 10&deg;C or lower.	<b>Option D</b> It will definitely be 5&deg;C or higher.
15	4_23 Science 9142	Natural Resources	What is the MAIN CAUSE of death for fish in water bodies polluted by fertilizers?		B
<b>Answer Options</b>					
		<b>Option A</b> decreased nutrition levels for algae	<b>Option B</b> decrease in oxygen levels	<b>Option C</b> increased water temperatures	<b>Option D</b> decrease in number of bacteria

## Question Paper

**Subject: Science**

**Grade: 9<sup>th</sup>**

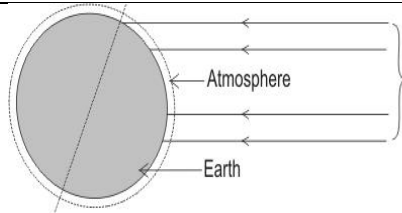
### Set-11

Q.N	Folder name & Question Code	Topic	Question with Answer Option	Image (If Any)	Correct Answer (Option-A,B,C,D)
1	4_23 Science 9154	Natural Resources	In which of these cases is the air MOST polluted?		A
<b>Answer Options</b>					
		<b>Option A</b> Xanthoria are growing, but NOT parmelia.	<b>Option B</b> Parmelia are growing, but NOT usnea.	<b>Option C</b> Pleurococcus are growing, and also usnea	<b>Option D</b> Neither usnea NOR xanthoria are growing.

2	4_23 Science 9155	Natural Resources	A factory treats its effluents with the aim of making the water completely unpolluted. Which of the following animals should be able to breed there in order for the company to say that the treatment has been a success?		D
<b>Answer Options</b>					
		<b>Option A</b> Rat tailed maggots	<b>Option B</b> Bloodworms	<b>Option C</b> Freshwater shrimps	<b>Option D</b> Stone-fly nymphs
3	4_25 Science 11666	Natural Resources	Which of these fuels will cause the least amount of Suspended Particulate Matter (SPM) pollution when burned?		D
<b>Answer Options</b>					
4		<b>Option A</b> Cowdung	<b>Option B</b> Coal	<b>Option C</b> wood	<b>Option D</b> Natural Gas


	4_25 Science 11672	Natural Resources	The Andaman Islands in the Bay of Bengal depend exclusively on rain for their freshwater supply. Some of the hotels in the Andamans started using seawater instead of fresh water for flushing toilets. This is an example of		B
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**Answer Options**

		<b>Option A</b> Recycling of resources.	<b>Option B</b> Conservation of resources.	<b>Option C</b> Prevention of pollution.	<b>Option D</b> Environmental planning.
5	3_15 Science 3653	Natural resources	Here are many reasons why the amount of heat received at higher latitudes is less than the lower latitudes. Which of these is NOT a reason?		B

**Answer Options**

		Option A Sunlight has to pass through a greater thickness of atmosphere in the higher latitudes.	Option B Sunlight has to travel a greater distance to enter the atmosphere in the higher latitudes.	Option C Sunlight that strikes the Earth is spread over a greater area in the higher latitudes.	Option D More of the sunlight striking Earth is reflected away in the higher latitudes.
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6	2_9 Science  5050	Natural resources	The figure shows five Roman coins issued between 65 AD and 117 AD. Their names are also shown alongside. From the scale given, we can say that the diameter of the sestertius issued by Nero was about:		C
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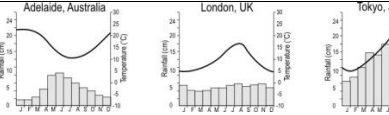
**Answer Options**

		Option A 2 cm	Option B 2.6 cm	Option C 3.2 cm	Option D 3.8 cm
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7	2_9 Science  6162	Natural resources	Which of these is true about the temperature from the surface of the earth to its core?		A
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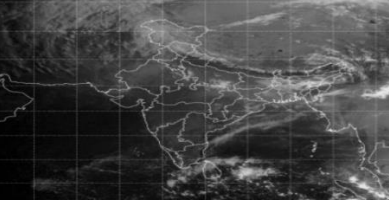
**Answer Options**

		Option A The temperature RISES constantly from the surface to the core.	Option B The temperature FALLS constantly from the surface to the core.	Option C The temperature FALLS for about 20 kilometres and then RISES till the core.	Option D The temperature RISES for about 20 kilometres and then FALLS till the core.
--	--	--	--	---	---

8	2_9  Science  6168	Natural resources	<p>Study the graphs showing the average temperature (using the scale on the RIGHT) and rainfall statistics (using the scale on the LEFT) for 4 important cities. The question is based on this data.</p> <p>A characteristic of cities in the southern hemisphere that can be observed in the above graphs is</p>		B
---	--------------------------------	-------------------	---	---	---

**Answer Options**

		Option A They receive most of their rainfall in the summer months.	Option B They have summer when the northern hemisphere has winter.	Option C The variation in temperature is quite high across the year.	Option D June is the month of maximum rainfall.
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9	2_9  Science  5091	Natural resources	<p>Study this satellite map of India of April 14, 2003. Over which of the FOLLOWING states / regions are the most clouds observed:</p>		C
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**Answer Options**

		Option A Maharashtra	Option B Karnataka	Option C North-eastern region	Option D Rajasthan																												
<b>10</b>	<b>2_9 Science 5076</b>	Natural Resources	Study the table and answer questions. Which of these is the source for pollutants like lead, NO <sub>2</sub> and SO <sub>2</sub> ?	<table border="1"> <thead> <tr> <th>Pollutant</th> <th>Description</th> <th>Sources</th> <th>Effects</th> </tr> </thead> <tbody> <tr> <td>Carbon Monoxide</td> <td>A colorless, odorless gas emitted when fuel is burnt</td> <td>Cars, wood stoves</td> <td>Less oxygen in blood, mental ailments, heart</td> </tr> <tr> <td>Lead</td> <td>A metal with a long life, very resistant to corrosion and used in storage batteries and also as an additive in petrol.</td> <td>Coal-fired electric power plants, metal refineries, lead smelting industries such as battery manufacturers</td> <td>Brain damage, constipation and liver-ack that then interfere food in food chain</td> </tr> <tr> <td>Nitrogen Dioxide</td> <td>A light brown gas at low concentrations</td> <td>Cars, coal-burning stoves, coal-fired electric power plants</td> <td>Lung damage, damage to crop</td> </tr> <tr> <td>Ozone</td> <td>A pale blue poisonous gas which is an allotropic form of oxygen, usually formed when an electric spark is passed through oxygen</td> <td>Vehicles (formed mainly from pollutants in exhaust), other sources of ozone-forming gases such as gas stations, paints</td> <td>Eye irritation, respiratory problems, lung damage, damaged vegetation, etc.</td> </tr> <tr> <td>Particulate Matter</td> <td>Soot, dust, tiny droplets of liquid, and other materials</td> <td>Diesel engines, windblown dust, wood stove</td> <td>Lung damage, eye irritation, reduced visibility, other buildings and statues</td> </tr> <tr> <td>Sulphur Dioxide</td> <td>Gas emitted when coal is burnt as fuel</td> <td>Coal-burning electric power plants, coal-burning stoves, refineries</td> <td>Eye irritation, lung damage, respiratory organ damaged (lungs, other buildings and statues (effects are largely due to rain))</td> </tr> </tbody> </table>	Pollutant	Description	Sources	Effects	Carbon Monoxide	A colorless, odorless gas emitted when fuel is burnt	Cars, wood stoves	Less oxygen in blood, mental ailments, heart	Lead	A metal with a long life, very resistant to corrosion and used in storage batteries and also as an additive in petrol.	Coal-fired electric power plants, metal refineries, lead smelting industries such as battery manufacturers	Brain damage, constipation and liver-ack that then interfere food in food chain	Nitrogen Dioxide	A light brown gas at low concentrations	Cars, coal-burning stoves, coal-fired electric power plants	Lung damage, damage to crop	Ozone	A pale blue poisonous gas which is an allotropic form of oxygen, usually formed when an electric spark is passed through oxygen	Vehicles (formed mainly from pollutants in exhaust), other sources of ozone-forming gases such as gas stations, paints	Eye irritation, respiratory problems, lung damage, damaged vegetation, etc.	Particulate Matter	Soot, dust, tiny droplets of liquid, and other materials	Diesel engines, windblown dust, wood stove	Lung damage, eye irritation, reduced visibility, other buildings and statues	Sulphur Dioxide	Gas emitted when coal is burnt as fuel	Coal-burning electric power plants, coal-burning stoves, refineries	Eye irritation, lung damage, respiratory organ damaged (lungs, other buildings and statues (effects are largely due to rain))	<b>C</b>
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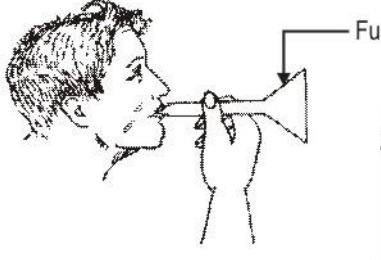
**Answer Options**

		Option A Cars	Option B Wood stoves	Option C Coal-fired power plants	Option D Refineries																												
<b>11</b>	<b>2_9 Science 5075</b>	Natural Resources	Study the table below and answer questions This pollutant is released from cars, causes lung damage and dissolves in water to form an acid. It is	<table border="1"> <thead> <tr> <th>Pollutant</th> <th>Description</th> <th>Sources</th> <th>Effects</th> </tr> </thead> <tbody> <tr> <td>Carbon Monoxide</td> <td>A colorless, odorless gas emitted when fuel is burnt</td> <td>Cars, wood stoves</td> <td>Less oxygen in blood, mental ailments, heart</td> </tr> <tr> <td>Lead</td> <td>A metal with a long life, very resistant to corrosion and used in storage batteries and also as an additive in petrol.</td> <td>Coal-fired electric power plants, metal refineries, lead smelting industries such as battery manufacturers</td> <td>Brain damage, constipation and liver-ack that then interfere food in food chain</td> </tr> <tr> <td>Nitrogen Dioxide</td> <td>A light brown gas at low concentrations</td> <td>Cars, coal-burning stoves, coal-fired electric power plants</td> <td>Lung damage, damage to crop</td> </tr> <tr> <td>Ozone</td> <td>A pale blue poisonous gas which is an allotropic form of oxygen, usually formed when an electric spark is passed through oxygen</td> <td>Vehicles (formed mainly from pollutants in exhaust), other sources of ozone-forming gases such as gas stations, paints</td> <td>Eye irritation, respiratory problems, lung damage, damaged vegetation, etc.</td> </tr> <tr> <td>Particulate Matter</td> <td>Soot, dust, tiny droplets of liquid, and other materials</td> <td>Diesel engines, windblown dust, wood stove</td> <td>Lung damage, eye irritation, reduced visibility, other buildings and statues</td> </tr> <tr> <td>Sulphur Dioxide</td> <td>Gas emitted when coal is burnt as fuel</td> <td>Coal-burning electric power plants, coal-burning stoves, refineries</td> <td>Eye irritation, lung damage, respiratory organ damaged (lungs, other buildings and statues (effects are largely due to rain))</td> </tr> </tbody> </table>	Pollutant	Description	Sources	Effects	Carbon Monoxide	A colorless, odorless gas emitted when fuel is burnt	Cars, wood stoves	Less oxygen in blood, mental ailments, heart	Lead	A metal with a long life, very resistant to corrosion and used in storage batteries and also as an additive in petrol.	Coal-fired electric power plants, metal refineries, lead smelting industries such as battery manufacturers	Brain damage, constipation and liver-ack that then interfere food in food chain	Nitrogen Dioxide	A light brown gas at low concentrations	Cars, coal-burning stoves, coal-fired electric power plants	Lung damage, damage to crop	Ozone	A pale blue poisonous gas which is an allotropic form of oxygen, usually formed when an electric spark is passed through oxygen	Vehicles (formed mainly from pollutants in exhaust), other sources of ozone-forming gases such as gas stations, paints	Eye irritation, respiratory problems, lung damage, damaged vegetation, etc.	Particulate Matter	Soot, dust, tiny droplets of liquid, and other materials	Diesel engines, windblown dust, wood stove	Lung damage, eye irritation, reduced visibility, other buildings and statues	Sulphur Dioxide	Gas emitted when coal is burnt as fuel	Coal-burning electric power plants, coal-burning stoves, refineries	Eye irritation, lung damage, respiratory organ damaged (lungs, other buildings and statues (effects are largely due to rain))	<b>B</b>
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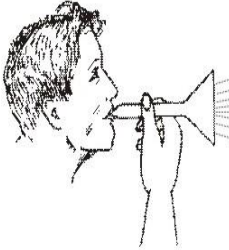
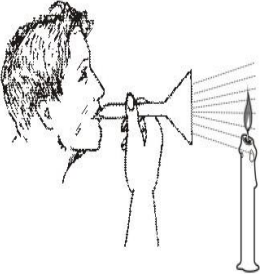
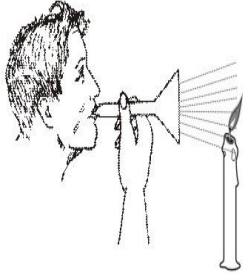
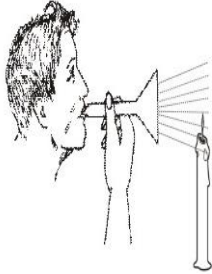
**Answer Options**

		Option A Carbon monoxide	Option B Nitrogen Dioxide	Option C Ozone	Option D Sulphur Dioxide
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12	3_17 Science 1857	NATURAL RESORCES	What will happen to the flame when air is blown as shown in the figure?		A
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**Answer Options**

		<p style="text-align: center;"><b>Option A</b></p>  <p style="text-align: center;">A.</p>	<p style="text-align: center;"><b>Option B</b></p>  <p style="text-align: center;">B.</p>	<p style="text-align: center;"><b>Option C</b></p>  <p style="text-align: center;">C.</p>	<p style="text-align: center;"><b>Option D</b></p>  <p style="text-align: center;">D.</p>
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13	4_23 Science 9159	NATURAL RESOURCES	Aditya did the following experiment. He took 2 green bananas in a polythene cover and kept them aside on a shelf. Then he took 2 more green bananas from the same bunch of fruits, and an apple, and put them in an identical polythene cover and kept them on the same shelf. He left both polythene covers undisturbed for two days. What was the hypothesis that Aditya was probably trying to check?		B
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**Answer Options**

		<b>Option A</b> In nature bananas ripen completely in about 2 days.	<b>Option B</b> Apples increase the speed at which bananas ripen.	<b>Option C</b> Bananas increase the speed at which apples ripen.	<b>Option D</b> Polythene increases the speed at which apples ripen.												
14	4_24 Science 10362	Natural resources	Since sulphur in the free state is found at depths of more than 150 meters below the Earth's surface, the method of extraction of sulphur differs from other materials. The figure given below depicts this. In this process, super-heated water and compressed air are passed underground through pipes. Due to the pressure, liquid sulphur flows out of the pipe. Which of the properties of sulphur, mentioned in the table above, are used in its extraction?	<div style="text-align: right; margin-right: 20px;">             Compressed               Super-heated water (above 100°C)           </div> <table border="1" style="margin-left: auto; margin-right: auto;"> <tr> <td>P</td> <td>Its atomic mass is 32.</td> </tr> <tr> <td>Q</td> <td>It has 16 neutrons in an atom.</td> </tr> <tr> <td>R</td> <td>Its melting point is 115.2° C.</td> </tr> <tr> <td>S</td> <td>Its boiling point is 444.6° C.</td> </tr> <tr> <td>T</td> <td>It is insoluble in water.</td> </tr> <tr> <td>W</td> <td>It combines with oxygen.</td> </tr> </table>	P	Its atomic mass is 32.	Q	It has 16 neutrons in an atom.	R	Its melting point is 115.2° C.	S	Its boiling point is 444.6° C.	T	It is insoluble in water.	W	It combines with oxygen.	B
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**Answer Options**

		<b>Option A</b> P and Q	<b>Option B</b> R and T	<b>Option C</b> S and W	<b>Option D</b> Q, S and W
15	4_24 Science 10369	Natural resources	A hydrocarbon is burnt in air completely. What are the products obtained?		A

**Answer Options**

		<b>Option A</b> Carbon dioxide + water	<b>Option B</b> Carbon monoxide + water	<b>Option C</b> Carbon black + water	<b>Option D</b> Graphite + water
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## Question Paper

**Subject: Science**

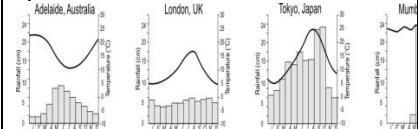
**Grade: 9<sup>th</sup>**

**Set-12**

Q.N	Folder name & Question Code	Topic	Question with Answer Option	Image (If Any)	Correct Answer (Option-A,B,C,D)
<b>1</b>	<b>3_16 Science  2517</b>	NATURAL RESOURCES	Which letters could correspond to carbon dioxide and carbon monoxide in the flowchart shown here?	<pre> graph TD     A([GASES]) -- Yes --&gt; B{Is it colourless?}     B -- No --&gt; B_out[ ]     B -- Yes --&gt; C{Is it odourless?}     C -- No --&gt; C_out[ ]     C -- Yes --&gt; D{Is it poisonous?}     D -- No --&gt; D_out[ ]     D -- Yes --&gt; E[S]                     </pre>	<b>C</b>
<b>Answer Options</b>					
		Option A Both would	Option B Both would correspond to S	Option C Carbon dioxide would	Option D Carbon dioxide

		correspond to R		correspond to R and Carbon monoxide to S	would correspond to S and Carbon monoxide to R
<b>2</b>	<b>3_16 Science  2505</b>	NATURAL RESOURCES	In many countries including India, petrol cars are expected to use unleaded petrol and not leaded petrol which was used earlier. What is the reason for this?		<b>B</b>
<b>Answer Options</b>					
		Option A Unleaded petrol is cheaper than leaded petrol	Option B Unleaded petrol is less hazardous for human health.	Option C Unleaded petrol gives more mileage than leaded petrol	Option D All of the above
<b>3</b>	<b>3_16 Science  2512</b>	NATURAL RESOURCES	The Andaman Islands in the Bay of Bengal depend exclusively on rain for their freshwater supply. Some of the hotels in the Andamans started using seawater instead of fresh water for flushing toilets. This is an example of _____.		<b>B</b>
<b>Answer Options</b>					
		Option A recycling of resources	Option B conservation of resources	Option C prevention of pollution	Option D environmental planning

4	2_9 Science  6167	NATURAL RESOURCES	Among the cities shown, which receives the most rainfall in a year?	Study the graphs showing the average temperature (using the scale on the RIGHT) and rainfall statistics (using the scale on the LEFT) for 4 important cities. The question is based on this data	C
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**Answer Options**

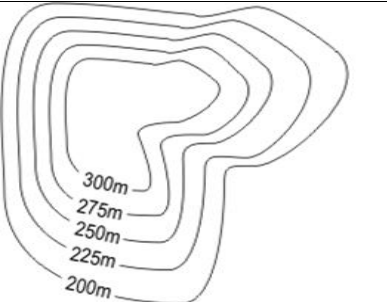
		Option A Adelaide	Option B London	Option C Tokyo	Option D Mumbai
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5	2_9 Science  5052	NATURAL RESOURCES	The fire shown below started in a factory due to a leaking petroleum product. Where the stream from the fire extinguisher should be directed?		C
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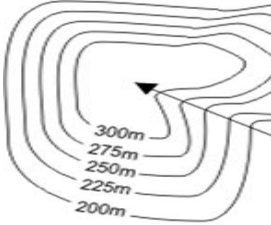
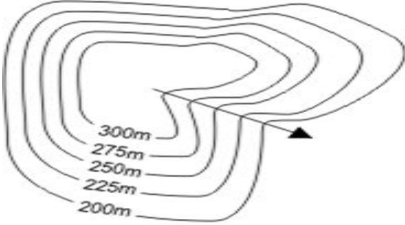
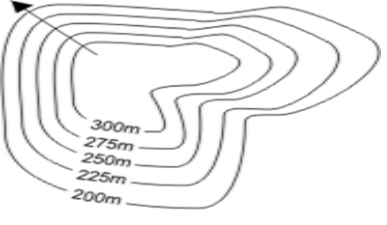

**Answer Options**

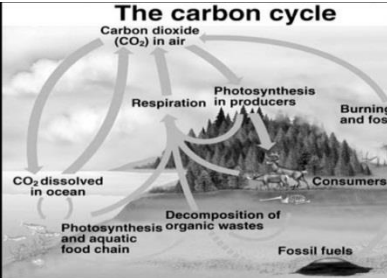
		Option A A	Option B B	Option C C	Option D D
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6	2_9 Science  6138	NATURAL RESOURCES	Given below is a list of household waste. The list has been put under 2 headings. One item in the list has been put under the WRONG heading. Identify it.	PUT IN COMPOST PIT Glass bottle Vegetable waste Leaves Used tea leaves	SENT FOR RECYCLING Polythene bags Plastic bottles Tin cans Cartons (Cardboard b	<b>A</b>
<b>Answer Options</b>						
		Option A Glass bottle	Option B Leaves	Option C Polythene bags		Option D Tin cans
7	2_9 Science  6146	NATURAL RESOURCES	According to a recent newspaper report, environmentalists are fighting for use of diesel having lower sulphur content. Why?			<b>B</b>
<b>Answer Options</b>						
		Option A Manufacture of sulphur is a highly polluting process	Option B Sulphur dioxide in the exhaust of these vehicles is a major air pollutant	Option C Diesel having sulphur harms the engine and the driver's health		Option D Sulphuric acid is produced in the engine of these vehicles

8	2_9 Science  6159	NATURAL RESOURCES	The contour map of a hilly region shown in the figure below does not show a river that actually flows through it. Which of these arrows could be representing the position and direction of the river correctly?		B
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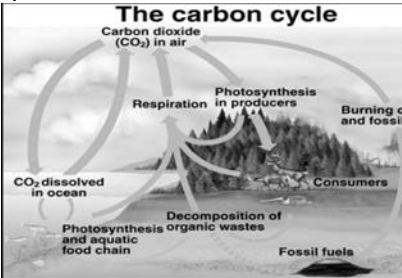
**Answer Options**

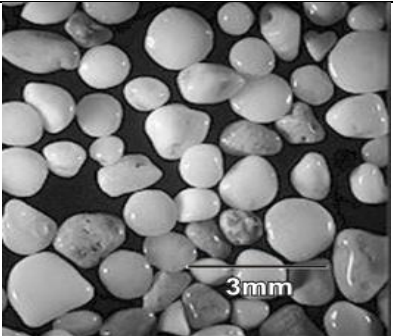
		<p>Option A</p>  <p style="text-align: center;"><b>A</b></p>	<p>Option B</p>  <p style="text-align: center;"><b>B</b></p>	<p>Option C</p>  <p style="text-align: center;"><b>C</b></p>	<p>Option D</p>  <p style="text-align: center;"><b>D</b></p>
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9	3_15 Science 3668	NATURAL RESOURCES	From the above graphic, it appears that an appropriate definition for the Carbon Cycle may be:	<p>Study the illustration representing the Carbon Cycle and answer the question</p> 	B
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**Answer Options**



		Option A the various natural and man-made processes that release carbon dioxide into the atmosphere	Option B a complex series of interactions by which carbon passes through the air, water, land and living things	Option C the process by which water travels in a sequence from the air to the Earth and returns to the atmosphere	Option D the evaporation, condensation and precipitation of carbon dioxide in the Earth's eco-system				
10	3_15 Science 3669	NATURAL RESOURCES	All the processes listed below RELEASE carbon dioxide, except one. Identify the one that does NOT release carbon dioxide.	Study the illustration representing the Carbon Cycle and answer the question 	<b>A</b>				
<b>Answer Options</b>									
		Option A Photosynthesis	Option B Burning of wood	Option C Respiration	Option D Organic decomposition				
11	3_17 Science 1828	Natural resources	Which type of soil do the particles shown in the figure belong to?(Use the scale given in the photograph)	<table border="1" style="margin-left: auto; margin-right: auto;"> <tr> <td><b>Gravel</b></td> <td><b>Sand</b></td> </tr> <tr> <td>&gt; 2 mm</td> <td>0.05 - 2 mm</td> </tr> </table>	<b>Gravel</b>	<b>Sand</b>	> 2 mm	0.05 - 2 mm	<b>B</b>
<b>Gravel</b>	<b>Sand</b>								
> 2 mm	0.05 - 2 mm								

					
--	--	--	--	---	--

**Answer Options**

		<b>Option A</b> Gravel	<b>Option B</b> Sand	<b>Option C</b> Slit	<b>Option D</b> clay
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12	4_24 Science 10387	Natural Resources	All the GIVEN steps aim at	<ol style="list-style-type: none"> <li>1. Reduce automobile usage: take public transp</li> <li>2. Save energy, switch off eletrical appliances w</li> <li>3. Plant trees</li> <li>4. Recycle</li> </ol>	A
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**Answer Options**

		<b>Option A</b> reducing global warming	<b>Option B</b> reducing green coverage	<b>Option C</b> increasing power supply	<b>Option D</b> reducing the ozone layer
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13	4_23 Science 9136	Natural Resources	Which of these meshes would allow FINE SAND through but not COARSE SAND?		B
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**Answer Options**

		<b>Option A</b> Size 20	<b>Option B</b> Size 50	<b>Option C</b> Size 100	<b>Option D</b> Size 200
14	<b>3_16</b> <b>Science</b>  <b>2513</b>	NATURAL RESOURCES	An animal census in Mudhumalai Wildlife Sanctuary revealed that there were about 2,000 elephants, 40 tigers, 200 sloth bears, 13,000 deer and more than 40,000 miscellaneous animals in these jungles. Which is the best method of representing this data in a meaningful way?		<b>A</b>

**Answer Options**

		Option A a table	Option B a pie chart	Option C a line graph	Option D a Venn diagram
15	<b>3_16</b> <b>Science</b>  <b>2514</b>	NATURAL RESOURCES	Identify P,Q and R in this representation of the Rock Cycle		<b>A</b>



## Question Paper

**Subject: Science**

**Grade: 9<sup>th</sup>**

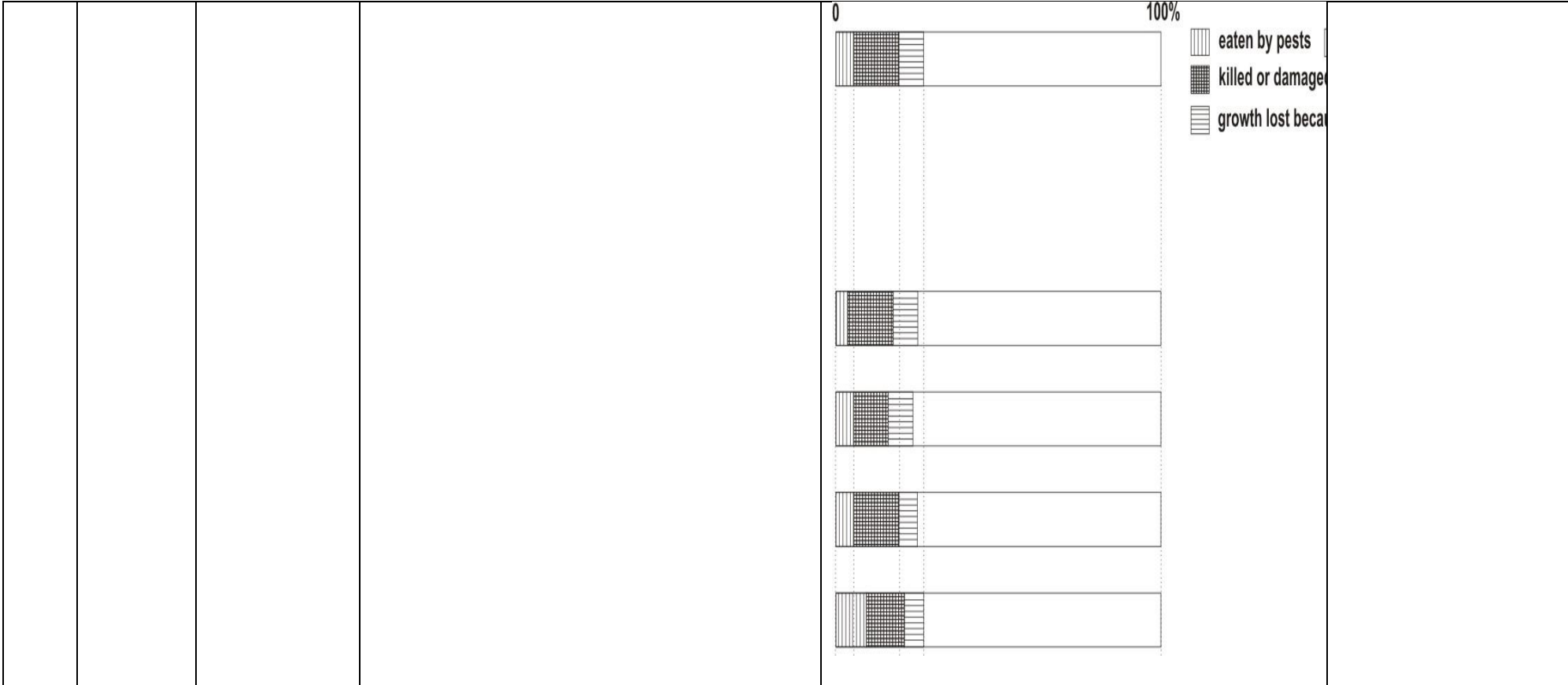
### Set-13

Q.N	Folder name & Question Code	Topic	Question with Answer Option	Image (If Any)	Correct Answer (Option-A,B,C,D)
1	3_16 Science 2499	Improvement In Food Resources	Farm Fresh" shop in Kolkata advertises that they sell vegetables grown through organic farming methods. What is likely to be special about such vegetables?"		D
<b>Answer Options</b>					
		Option A They are	Option B They remain fresh for longer periods of	Option C They are genetically modified for better taste.	Option D They are grown

		available at much cheaper prices.	time.		without chemical fertilizers.
2	4_25 Science 11742	Improvement in food resources	Sarathy wishes to investigate the effect of the type of light on a plant's growth. He takes three identical potted plants and places one in the lawn, one in a closed room containing a tubelight; and a third in a closed room containing a bulb which gives yellow light. The bulb and tubelight are always on. He waters the plants regularly and to the same extent. Which of these could introduce error into the experiment results?		A
<b>Answer Options</b>					
		<b>Option A</b> The fact that the tubelight and bulb are never switched off.	<b>Option B</b> The fact that the light intensities are different in the three cases.	<b>Option C</b> The fact that the three plants were watered similarly.	<b>Option D</b> All of the above
3	4_23 Science 9138	Improvement in food resources	YEAST is used to make which of these?		A

**Answer Options**

Answer Options						
		<b>Option A</b> Bread	<b>Option B</b> Dal	<b>Option C</b> Milk		<b>Option D</b> Curd
<b>4</b>	<b>3_15</b> <b>Science</b> <b>3631</b>	Improvement In Food Resources	The table below shows a few products obtained from plants and animals. Which one of the following has been placed in the wrong column?	<b>Plant Produce</b>	<b>Animal Produce</b>	<b>C</b>
				Jaggery	Pearls	
				Cardamom	Wool	
				Bamboo	Rubber	
				Tamarind	Silk	
<b>Answer Options</b>						
		Option A Jaggery	Option B Tamarind	Option C Rubber		Option D Silk
<b>5</b>	<b>4_23</b> <b>Science</b> <b>9164</b>	Improvement in food resources	See the graphical data representations for a crop in the year 2003. In 2004, a very effective pest control programme was introduced. There was no change in any of the other factors. Which of these would have been the graph for 2004?			<b>A</b>



<b>Answer Options</b>				
	<b>Option A</b> A	<b>Option B</b> B	<b>Option C</b> C	<b>Option D</b> D



# Question Paper

**Subject: Science**


**Grade: 9<sup>th</sup>**

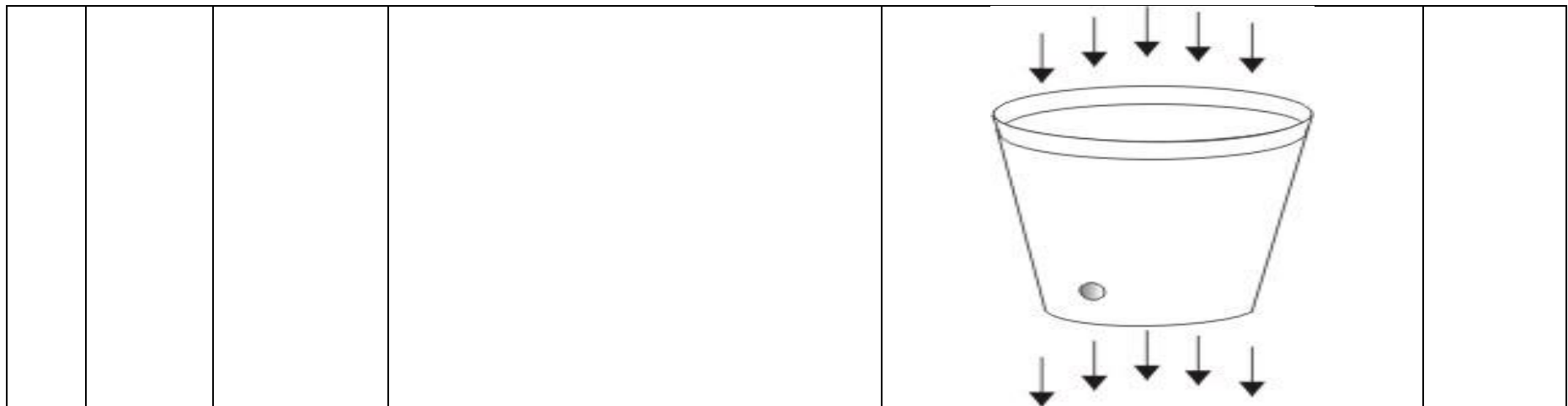
## Set-14(MIXED SET)

Q.N	Folder name & Question Code	Topic	Question with Answer Option	Image (If Any)	Correct Answer (Option-A,B,C,D)
<b>1</b>	<b>1_3 Science 7325</b>	<b>7.DIVERSITY IN LIVING ORGANISM</b>	Among these species, which one appeared most recently on the earth?		<b>C</b>
<b>Answer Options</b>					
	<b>Option A</b> Fish	<b>Option B</b> Reptiles	<b>Option C</b> Man	<b>Option D</b> Birds	
<b>2</b>	4_23 Science 9045	9.FORCE AND LAWS OF MOTION	The momentum of a moving object is a measure of its motion, and is defined as the product of its mass and velocity. That is why, in common experience, the impact of hitting a moving object depends both on its size (mass) and its speed (velocity). What would be the unit of momentum?		<b>C</b>
<b>Answer Options</b>					

	Option A Kg x s	Option B Kg x m x s	Option C Kg x m/s	Option D Kg x m/s													
3.	3_16 Science 2422	<b>10.GRAVITATION</b>	The density of water is $1 \text{ g/cm}^3$ . If each of these liquids X, Y and Z is immiscible in water, which of them will float on water?	<table border="1"> <thead> <tr> <th>Liquid</th> <th>Mass (g)</th> <th>Volume (<math>\text{cm}^3</math>)</th> </tr> </thead> <tbody> <tr> <td>X</td> <td>5.4</td> <td>5</td> </tr> <tr> <td>Y</td> <td>46</td> <td>50</td> </tr> <tr> <td>Z</td> <td>130</td> <td>100</td> </tr> </tbody> </table>	Liquid	Mass (g)	Volume ( $\text{cm}^3$ )	X	5.4	5	Y	46	50	Z	130	100	C
Liquid	Mass (g)	Volume ( $\text{cm}^3$ )															
X	5.4	5															
Y	46	50															
Z	130	100															

**Answer Options**

	<b>Option A</b> All the three liquids will float	<b>Option B</b> Liquids X and Z will float	<b>Option C</b> Liquid Y will float	<b>Option D</b> The information given is not enough to decide	
4	4_23 Science 9062	11.WORK AND ENERGY	Take a paper or Styrofoam cup, and make a small hole with a sharpened pencil on the side of the cup near its bottom. Hold your thumb over the hole as you fill the cup with water. Remove your thumb. Water will flow out as shown here. Take the same cup. Again, seal the hole with your thumb and fill the cup. Drop the filled cup from a height as shown here and observe it carefully while it falls. What will happen to the water flow WHILE THE CUP IS FALLING?		C



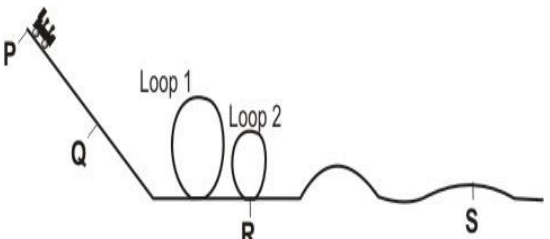
**Answer Options**

	Option A The flow of water will increase	Option B The flow of water will almost stop	Option C The flow of water will remain unchanged	Option D The water will overflow from the top of the cup	
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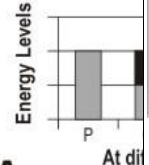
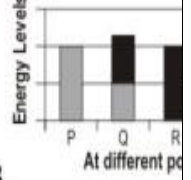
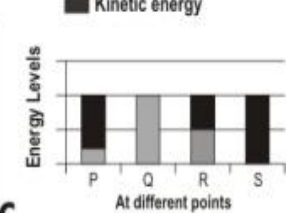
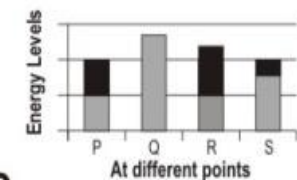
<b>5</b>	4_23 Science  9045	9.FORCE AND LAWS OF MOTION	The momentum of a moving object is a measure of its motion, and is defined as the product of its mass and velocity. That is why, in common experience, the impact of hitting a moving object depends both on its size (mass) and its speed (velocity). What would be the unit of momentum?		<b>C</b>
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**Answer Options**

	Option A Kg x s	Option B Kg x m x s	Option C Kg x m/s	Option D Kg x m/s	
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6	3_17 Science 1507	11.WORK AND ENERGY	Potential energy is dependent upon an object's mass and its position (height), while kinetic energy is dependent upon its mass and speed. A roller coaster starts from P and reaches S, passing through loops on the way. Which graph BEST describes how the potential and kinetic energy of the roller coaster change during motion? (Potential Energy - grey; Kinetic energy - black)		A
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**Answer Options**

<p align="center"><b>Option A</b></p> 	<p align="center"><b>Option B</b></p> 	<p align="center"><b>Option C</b></p> 	<p align="center"><b>Option D</b></p> 	
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7	3_16 Science 2407	11.WORK AND ENERGY	In Physics, work is said to be done if an unbalanced force moves its point of application through a distance measured in the direction of force. Which of these pictures BEST illustrates work being done?		A
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**Answer Options**

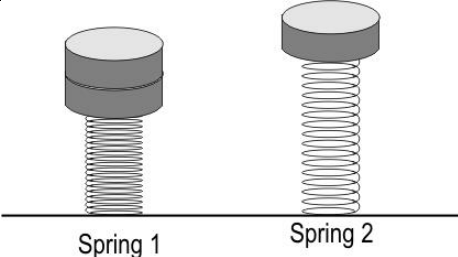
	<p align="center"><b>Option A</b></p>	<p align="center"><b>Option B</b></p>	<p align="center"><b>Option C</b></p>	<p align="center"><b>Option D</b></p> 	
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<b>8</b>	4_23 Science 9040	11.WORK AND ENERGY	In which of these simple machines is the output force (exerted by the machine) GREATER than the input force (exerted by the user)?		B
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**Answer Options**

	Option A Beam balance	Option B Wheel barrow	Option C Fishing rod	Option D Scissors	
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<b>9</b>	4_23 Science 9060	11.WORK AND ENERGY	Springs 1 and 2 as shown in the figure are identical springs. In the positions shown, which spring has more stored energy?		A
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**Answer Options**

	Option A Spring 1 has more stored energy.	Option B Spring 2 has more stored energy.	Option C Both have the same stored energy.	Option D It depends on the spring's material.	
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<b>10</b>	4_23 Science  9059	12.SOUND	The table below shows the speed of sound in different substances. The names of the substances are given in alphabetical order. Which of these substances does NOT follow the pattern of the speed of sound in materials of different states of matter?	<b>Medium</b>	<b>Speed of sound (m/s)</b>	<b>State</b>	<b>B</b>
				Air (0°C)	331	gas	
				Copper	4760	solid	
				Cork	500	solid	
				Helium (0°C)	965	gas	
				Hydrogen	1284	gas	
				Kerosene (25°C)	1324	liquid	
				Lead	1960	solid	
				Mercury	1452	liquid	
				Rubber	1830	solid	
Water (20°C)	1482	liquid					

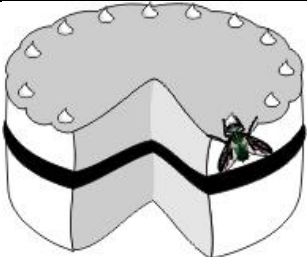
**Answer Options**

	<b>Option A</b> Air	<b>Option B</b> Cork	<b>Option C</b> Mercury	<b>Option D</b> Water	
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<b>11</b>	4_23 Science  9058	12.SOUND	The question is related to the speed of sound. If the formula, $v = K + 0.6T$ gives the speed of sound in air (v) in metres per second, where T is the temperature of the air in degrees Celsius, what should K be equal to?		<b>B</b>
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**Answer Options**

	<b>Option A</b> speed of sound in vacuum in metres per second	<b>Option B</b> speed of sound in air at 0° C in metres per second	<b>Option C</b> a constant representing the temperature of the air	<b>Option D</b> (the value of K cannot be determined from the information given)	
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12	4_23 Science 9034 20.5.10	13.(Why do we fall ill)	Which of the following diseases can be caused by eating the pastry infected by germs from this fly?		
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**Answer Options**

	Option A Diarrhoea	Option B Malaria	Option C Measles	Option D Cold	
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13	4_25 Science  11959 12.3.6	13.(Why do we fall ill)	Smallpox, a deadly disease which is believed to have been eradicated, was initially thought to spread through the air. Today, we know that it actually spread through		C
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**Answer Options**

	Option A Contaminated water.	Option B Carrier mosquitoes.	Option C Contact with an infected person.	Option D Contaminated food.	
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14	3_16 Science  2410 24.6.12	13.(Why do we fall ill)	Ketki is unwell. Her mother adds 1 teaspoon of table salt and 8 teaspoons of sugar in a litre of water and gives it to Ketki to drink at regular		B
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			intervals. What is Ketki most probably suffering from?		
<b>Answer Options</b>					
	<b>Option A</b> Jaundice	<b>Option B</b> Diarrhea	<b>Option C</b> Typhoid	<b>Option D</b> Pneumonia	