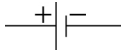
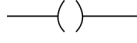
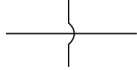

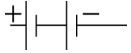
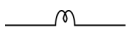
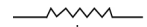
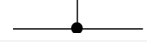


	(iv) Upward growth of shoot (v) Growth of root towards water (vi) Growth of pollen tube towards ovules	
14	<p>Current in the circuit = $\frac{\text{Voltage of battery}}{\text{Total resistance}}$</p> $= \frac{3 \text{ V}}{3 \Omega + 4 \Omega + 5 \Omega} = 0.25 \text{ A}$ <p>\therefore Potential difference across $5 \Omega = 5 \Omega \times 0.25 \text{ A} = 1.25 \text{ V}$</p>	3
15	<p>Magnetic field lines are closed curves directed from north to south pole outside the magnet and south to north pole inside it such that the tangent to any point of the curve gives the direction of the field at that point.</p> <p>Properties :</p> <p>(1) The No. of field lines per unit area gives the relative strength of field. (2) Two field lines can never intersect each other.</p>	3
16	A closely wound cylindrical coil of insulated metallic wire. A current carrying solenoid behaves as an electromagnet. The uniform magnetic field inside it may magnetise a steel rod permanently.	3
17	(i) wind energy, solar energy, bio gas use. (or any other) (ii) Non-renewable because they produce pollution. (iii) To make students aware about global issues like global warming / pollution.	3
18	<ul style="list-style-type: none"> • Fuel is a source of energy that we choose for doing same work. • Amount of heat released by it on burning per unit mass • easy storage and transportation. • economical • pollution free <p style="text-align: right;">(Any two)</p>	3
19	<p>Process in which new substances with new properties are formed only a rearrangement of atoms takes place</p> <p>(1) Evolution of gas : The chemical reaction between zinc and dil. H_2SO_4 $\text{Zn}_{(s)} + \text{H}_2\text{SO}_{4(aq)} \rightarrow \text{ZnSO}_{4(aq)} + \text{H}_{2(g)}$</p> <p>(2) Change in colour : The chemical reaction between potassium iodide solution and lead nitrate solution $\text{Pb}(\text{NO}_3)_{2(aq)} + 2\text{KI} \rightarrow 2\text{KNO}_{3(aq)} + \text{PbI}_{2(s)}$ colourless yellow</p> <p>(3) Formation of precipitate : The chemical reaction between sulphuric acid and barium chloride solution $\text{BaCl}_{2(aq)} + \text{H}_2\text{SO}_{4(aq)} \rightarrow 2\text{HCl}_{(aq)} + \text{BaSO}_{4(s)}$ white precipitate</p> <p>(4) Change in temperature : The chemical reaction between quick lime and water $\text{CaO}_{(s)} + \text{H}_2\text{O}_{(l)} \rightarrow \text{Ca}(\text{OH})_{2(aq)} + \text{heat}$ Quicklime</p>	5
20	(a) If H^+ ion concentration is more, pH will be less and vice versa or pH of a solution is inversely proportional to H^+ ion concentration or $\text{pH} = -\log(\text{H}^+)$ (b) This solution is neutral (c) 1M NaOH solution. (d) When the pH in the mouth is below 5.5, bacteria present in the mouth produce acids by degradation of sugar and corrode the tooth enamel. It can be prevented by using tooth pastes which are generally basic (e) As hydronium $[\text{H}_3\text{O}]^+$ ion.	5
21	(a) Common features of respiratory organs of animals. (i) Should have large surface area to get enough oxygen.	5

	<p>(ii) Walls of respiratory organs should be thin.</p> <p>(iii) Should have rich supply of blood for transport of gases.</p> <p>(b)</p> <table border="1"> <thead> <tr> <th></th> <th>Aerobic respiration</th> <th>Anaerobic respiration</th> </tr> </thead> <tbody> <tr> <td>(i)</td> <td>End products are carbon dioxide and water</td> <td>End products may be alcohol and lactic acid</td> </tr> <tr> <td>(ii)</td> <td>Considerable energy is released</td> <td>Much less energy is released</td> </tr> </tbody> </table>		Aerobic respiration	Anaerobic respiration	(i)	End products are carbon dioxide and water	End products may be alcohol and lactic acid	(ii)	Considerable energy is released	Much less energy is released	
	Aerobic respiration	Anaerobic respiration									
(i)	End products are carbon dioxide and water	End products may be alcohol and lactic acid									
(ii)	Considerable energy is released	Much less energy is released									
22	<p>Derivation of formula $H=I^2Rt$ with explanation</p> <p>$H = 200 \text{ J}$ $R = 8\Omega$ $t = 1 \text{ s}$ $V = ?$</p> <p>$H = I^2Rt$ $I = \sqrt{\frac{H}{Rt}} = 5\text{A}$ $V = IR$ $V = 5 \times 8 = 40 \text{ Volt}$</p>	5									
23	<p>(a) Heating effect of the electric circuit is utilized in working of an electrical fuse.</p> <p>(b) A fuse is connected in series to live wire of electric circuit. So that current first passes through it before it reaches other appliances.</p> <p>(c) A schematic labelled diagram fig. 13.20.</p>	5									
24	<p>(a) Definition of electric current</p> <p>(b) (i) An electric cell </p> <p>(ii) Open plug key </p> <p>(iii) Wire crossing without connection </p> <p>(iv) Variable resistor </p> <p>(v) Battery </p> <p>(vi) Electric bulb </p> <p>(vii) Resistance </p> <p>(viii) A wire joint </p>	5									
/SECTION - B											
25	(a)	1									
26	(a)	1									
27	(d)	1									
28	(b) Clean each metal piece with sand paper before using	1									
29	(b)	1									
30	(b)	1									
31	(c)	1									
32	(c) Green	1									
33	(c)	1									
34	(a) Neeru should mix the compounds in a solution form.	2									
	(b) On mixing two solutions, a white Ppt of BaSO_4 is formed.										
35	(i) Continuous circuit	2									
	(ii) Development of potential difference										
36	Epidermal cells, Stomata, Guard cells, Chloroplast	2									
	-o0o0o0o-										