



OSDAV Public School, Kaithal

PT-3(November, 2024)

Class :X

Subject : Science

Set- A

Time: 1 Hour 20 minutes

M.M. : 30

General Instructions:-

All questions are compulsory.

Q.No	Physics/ Chemistry	Marks
1	Name a metal which is found in liquid state.	1
2	Aluminium oxide and sodium oxide, which of these shows the property of amphoteric oxide?	1
3	Define the rule which is used to find the direction of magnetic field in a straight conductor.	1
4	Show the formation of NaCl by transfer of electron.	2
5	What do you mean by solenoid? Explain with diagram?	2
	(a) What are the factors on which magnitude of force depend when current carrying conductor is placed perpendicular to the magnetic field.	2
7	Explain any two properties of magnetic field line of force.	2
8	(a)Density of calcium is higher than that of water but calcium float when placed on the surface of water? Explain. (b)Write the difference between roasting and calcination. (c)What happens to zinc carbonate when it is heated strongly in limited supply of air?	3
9	A. Draw a diagram of electrolyte refining of metal zinc. B. Name the ore of mercury.	3
10	(a) Draw the diagram of domestic electric circuit. (b) What is the function of earth wire?	3
	Biology	
11	List two methods that have been used by females to prevent pregnancy.	1
12	What changes occur in uterus if A. Egg will get fertilise B. Egg will not get fertilise	2
13	“The sex of a newborn child is a matter of chance and none of the parents may be considered responsible for it”. Justify this statement with the help of flow chart showing determination of sex of a new born.	2
14	Write function of following A. Prostate gland B. Testes	2
15	A blue colour flower plant denoted by BB is cross-bred with that of white colour flower plant denoted by bb. (a) State the colour of flower you would expect in their F ₁ generation plants. (b) What must be the percentage of white flower plants in F ₂ generation if flowers of F ₁ plants are self-pollinated? (c) State the expected ratio of the genotypes BB and Bb in the F ₂ progeny.	3



OSDAV Public School, Kaithal

Periodic Test 3

Class :X

Subject : Science

Set- B

Time: 1 Hour 20 minutes

M.M. : 30

General Instructions:-

All questions are compulsory.

Q. No	Physics/ Chemistry	Marks
1	Name a non metal which is found in liquid state.	1
2	Aluminium oxide and sodium oxide, which of these not shows the property of amphoteric oxide?	1
3	Define the rule which is used to find the direction of magnetic field in a circular loop.	1
4	Show the formation of KCl by transfer of electron.	2
5	Draw the magnetic field line around a bar magnet.	2
	(a) What are the factors on which direction of force depend when current carrying conductor is placed perpendicular to the magnetic field.	2
7	(a) Explain why two magnetic field line don't intersect each other. (b) what will happen to the direction of magnetic field when we change the direction of current in a straight conductor?	2
8	(a) Sodium, and potassium stored in kerosene oil. Explain. (b) Oxide of highly reactive metal cannot be reduced by carbon explain. (c) Write an example of thermit reaction.	3
9	A. Draw a diagram of electrolyte refining of metal zinc. B. Name the alloy of copper and zinc.	3
10	(a) Draw the diagram of domestic electric circuit. (b) what is the colour of live wire?	3
	Biology	
11	List two methods that have been used by male to prevent pregnancy.	1
12	A. Scrotum is placed outside the abdomen cavity. Justify B. What is importance of prostate gland in male reproductive system?	2
13	“The sex of a newborn child is a matter of chance and none of the parents may be considered responsible for it”. Justify this statement with the help of flow chart showing determination of sex of a new born.	2
14	Write function of following A. Oviducts B. Placenta	2
15	A blue colour flower plant denoted by BB is cross-bred with that of white colour flower plant denoted by bb. (a) State the colour of flower you would expect in their F ₁ generation plants. (b) What must be the percentage of white flower plants in F ₂ generation if flowers of F ₁ plants are self-pollinated? (c) State the expected ratio of the genotypes BB and Bb in the F ₂ progeny.	3

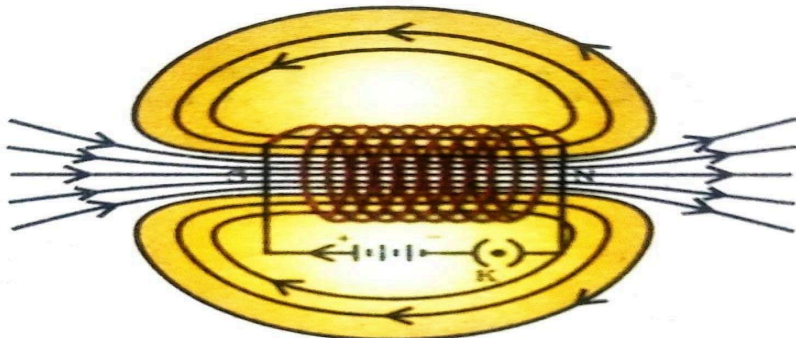


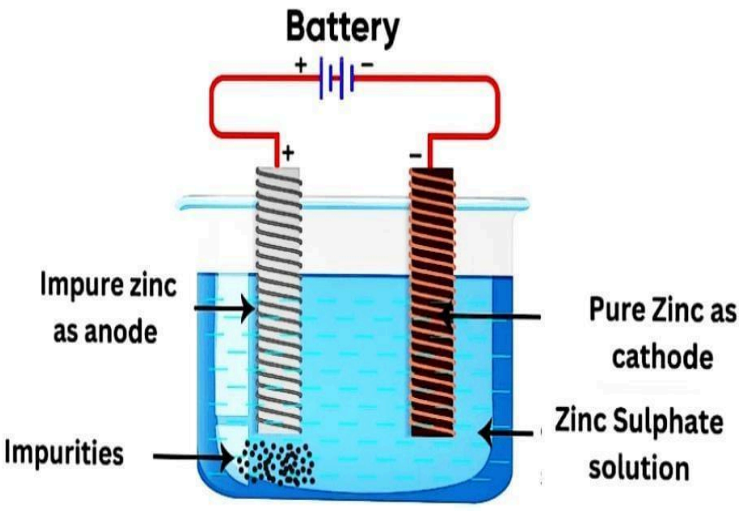
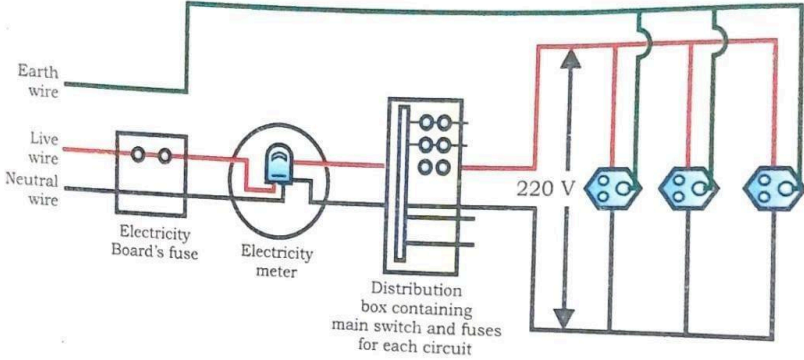
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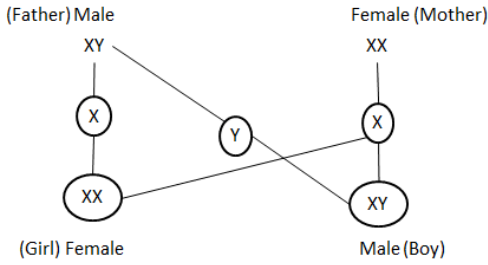
M.M. : 30

General Instructions:-

All questions are compulsory.

Q. No	Physics/ Chemistry	Marks
1	Mercury	1
2	Aluminium oxide.	1
3	Right hand thumb rule. Imagine that you are holding a current carrying conductor in your right hand such that thumb shows the direction of current and finger wrapped around the conductor shows the magnetic field lines	1
4	$\begin{array}{c} \text{Na} \rightarrow \text{Na}^+ + e^- \\ 2, 8, 1 \quad \quad 2, 8 \end{array}$ $\begin{array}{c} \text{Cl} + e^- \rightarrow \text{Cl}^- \\ 2, 8, 7 \quad \quad 2, 8, 8 \end{array}$ $\text{Na}^x + \cdot \ddot{\text{Cl}} : \rightarrow \text{Na}^+ [: \ddot{\text{Cl}} :]^-$	2
5	<p>A coil of many circular turns of insulated copper wire wrapped closely in the shape of cylinder is called a solenoid.</p> 	2
6	<p>(1) Magnitude of current (2) Magnitude of magnetic field (3) Length of rod</p>	2
7	<p>(1) Magnetic field line are closed curves (2) Magnetic field lines do not intersect each other.</p>	2

8	<p>(a) Calcium starts floating because the bubbles of hydrogen gas formed stick to the surface of the metal.</p> <p>(b) The sulphide ores are converted into oxides by heating strongly in the presence of excess air. This process is known as roasting. The carbonate ores are changed into oxides by heating strongly in limited air. This process is known as calcinations.</p> <p>(c) $\text{ZnCO}_3(\text{s}) \xrightarrow{\text{Heat}} \text{ZnO}(\text{s}) + \text{CO}_2(\text{g})$</p>	3
9	<p>(a)</p>  <p>(b) Cinnebar</p>	3
10	<p>(a)</p>  <p>(b) Earth wire take the current that leak from the metallic body to the earth.</p>	3
Biology		
11	1. IUCD 2. Oral pills	1
12	<p>If fertilization takes place, the zygote forms and leads to the pregnancy of a women that leads to a child birth.</p> <p>If fertilization does not take place, the endometrium degenerates and the menstruation occurs.</p>	2

13	<p>The sex of the individual is genetically determined i.e., genes inherited from parents decide whether the newborn will be a boy or a girl. A newborn who inherits an 'X' chromosome from father will be a girl and one who inherits a 'Y' chromosome will be a boy.</p> <div style="text-align: center;">  <p>Figure: Sex determination</p> </div>	2
14	<ol style="list-style-type: none"> 1. Provide fluidity and nourishment to sperms 2. Formation of sperms 	2
15	<ol style="list-style-type: none"> a. Blue b. 25% c. 1:2 	3



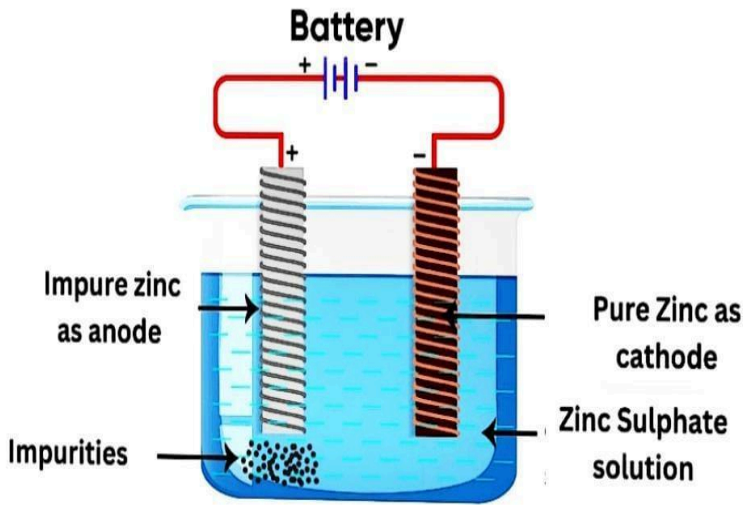
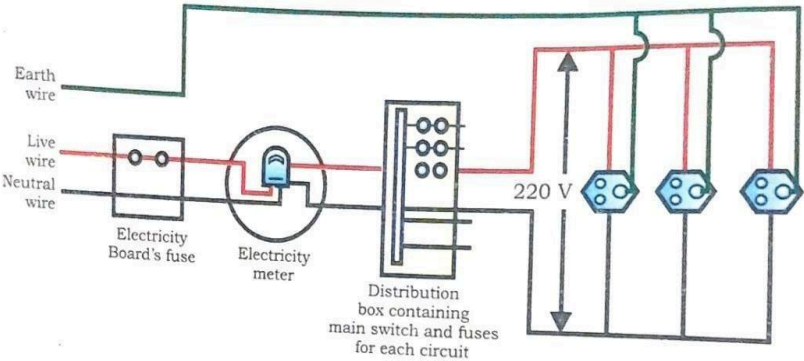
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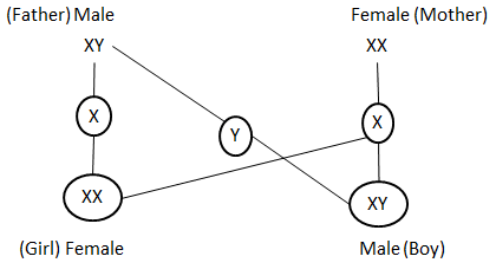
M.M. : 30

General Instructions:-

All questions are compulsory.

Q. No	Physics/ Chemistry	Marks
1	Bromine	1
2	Sodium oxide	1
3	Right hand thumb rule. Imagine that you are holding a current carrying conductor in your right hand such that thumb shows the direction of current and finger wrapped around the conductor shows the magnetic field lines.	1
4	$K \rightarrow K^+ + e^-$ $2, 8, 8, 1 \quad \quad \quad 2, 8, 8$ $Cl + e^- \rightarrow Cl^-$ $2, 8, 7 \quad \quad \quad 2, 8, 8$ $K^+ + \cdot \ddot{Cl} \cdot \rightarrow K^+ [\times \ddot{Cl} \cdot]$	2
5		2
6	(a) Direction of current (b) Direction of magnetic field	2
7	(a) No two field-lines are found to cross each other. If they did, it would mean that at the point of intersection, the compass needle would point towards two directions, which is not possible. (b) Direction of magnetic field reverse.	2

8	<p>(a) Metal such as potassium and sodium react so vigorously that they catch fire if kept in the open. Hence, to protect them and to prevent accidental fired, they are kept immersed in kerosene oil.</p> <p>(b) Highly reactive metal has more affinity for oxygen than carbon.</p> <p>(c) $\text{Fe}_2\text{O}_3 + \text{Al} \longrightarrow \text{Al}_2\text{O}_3 + \text{Fe}$</p>	3
9	<p>(a)</p>  <p>(b) Brass</p>	3
10	<p>(a)</p>  <p>(b) Red</p>	3
Biology		
11	condoms vasectomy	1
12	<ol style="list-style-type: none"> 1. To provide 2-3degree less temperature than body for formation of sperms 2. Provide nourishment and fluidity to sperms 	2

13	<p>The sex of the individual is genetically determined i.e., genes inherited from parents decide whether the newborn will be a boy or a girl. A newborn who inherits an 'X' chromosome from father will be a girl and one who inherits a 'Y' chromosome will be a boy.</p> <div style="text-align: center;">  <p>Figure: Sex determination</p> </div>	2
14	<ol style="list-style-type: none"> 1. Site of fertilisation 2. Help in providing nutrition , exchange of gases to foetus. 	2
15	<ol style="list-style-type: none"> 1. Blue 2. 25% 3. 1:2 	3