

A.P. SET CODE
D

MT - Z

2017 __ __ 1100 - **MT - Z** - SCIENCE & TECHNOLOGY (72) - II - SET - D (E)

Time : 2 Hours

Preliminary Model Answer Paper

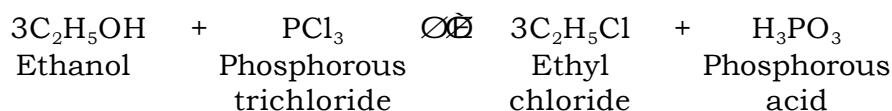
Max. Marks : 40

A.1.	(A) Answer the following sub-questions :	
	(1) Fill in the blanks and rewrite the complete statements :	
	(i) The organic compounds having double or triple bond in them are termed as unsaturated hydrocarbons .	1
	(ii) Liver is the largest gland in the body.	1
	(iii) The loss of water from plants is known as transpiration .	1
	(2) State whether the following statements are true or false and if false, write the correct statement :	
	(i) True	1
	(ii) True	1
A.1.	(B) Rewrite the following statements by selecting the correct options :	
	(1) (b) CH_3COOH	1
	(2) (d) All of these	1
	(3) In Hydra the type of reproduction is Budding .	1
	(4) Percentage of water absorbed is calculated by dividing increased weight by initial weight.	1
	(5) (c) by iodine test	1
A.2.	Answer the following subquestions : (any five)	
	(1) (i) Sodium (Na) and Potassium (K) belongs to group IA, so they are alkali metals.	2
	(ii) They are highly reactive metals.	
	(iii) Sodium and potassium react with oxygen in air at room temperature to form metallic oxide. They catch fire and start	

burning when kept open in the air. Hence, they are stored under kerosene oil to prevent their reaction with oxygen and moisture.

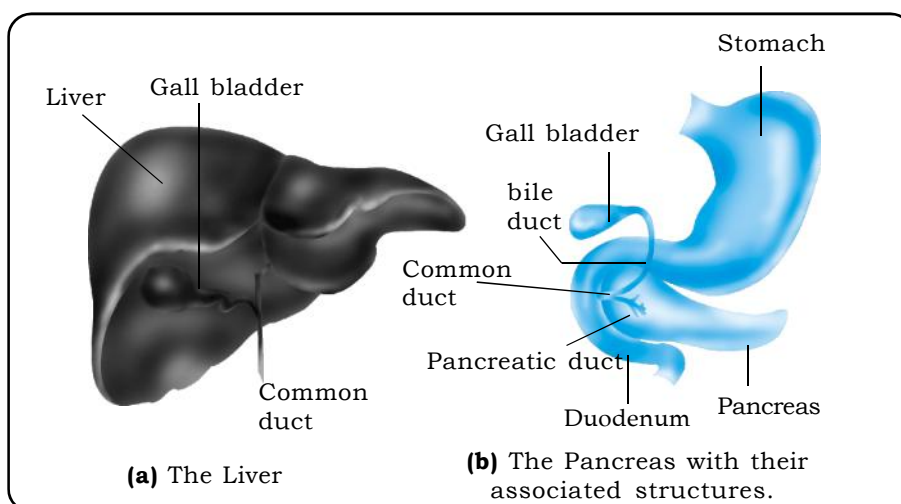


- (2) When ethanol reacts with PCl_3 (Phosphorous trichloride) it forms ethylchloride and phosphorous acid. 2



Arteries	Veins
<p>(i) Arteries carry blood away from the heart to supply it to various parts of the body.</p> <p>(ii) They carry oxygenated blood (except pulmonary artery).</p> <p>(iii) Blood pressure in arteries is high.</p> <p>(iv) Walls of arteries are thick.</p> <p>(v) Arteries do not have valves.</p>	<p>(i) Veins collect blood from different parts of the body and bring it back to the heart.</p> <p>(ii) They carry deoxygenated blood (except pulmonary vein).</p> <p>(iii) Blood pressure in veins is low.</p> <p>(iv) Walls of veins are thin.</p> <p>(v) Veins have valves.</p>

- (4) **Digestive glands :**



<p>(5)</p>	<p>Pollination :</p> <p>(i) The process of transfer of pollen grains from the anther to the stigma is called pollination.</p> <p>(ii) If this transfer of pollen occurs in the same flower or another flower of the same plant, it is known as self pollination.</p> <p>(iii) On the other hand, if pollen is transferred from one flower to the flower of another plant of the same species, it is known as cross pollination. The agents of cross pollination are wind, water or animals.</p>	<p>2</p>
<p>(6)</p>	<p>(i) Phenotype is the appearance of any detectable characteristic feature of an individual whereas the genotype is the genetic composition of an individual.</p> <p>(ii) The genes responsible for any particular character is present in pairs.</p> <p>(iii) Though, there are two genes, the phenotype depends on the presence of the dominant gene. e.g. the genotype for red colour flower is Rr or RR.</p> <p>(iv) Therefore, phenotypic and genotypic ratios are different.</p>	<p>2</p>
<p>A.3.</p>	<p>Answer the following subquestions : (any five)</p>	<p>3</p>
<p>(1)</p>	<p>(i) Corrosion of metals can be prevented if the contact between metal and air is cut off. This is done in a number of ways. Some of the methods are given below :</p> <p>(a) Corrosion can be prevented if the metal is coated with something which does not allow moisture and oxygen to react with it.</p> <p>(b) Coating of metals with paint, oil, grease or varnish prevents the corrosion of metals e.g rusting of iron can be prevented by this method.</p> <p>(c) Coating of corrosive metals with non corrosive metals also prevents corrosion. Some of the methods by which metals can be coated with non-corrosive metals are:</p> <p>(ii) Galvanizing : It is process of giving a thin coating of zinc on iron or steel to protect them from corrosion. E.g shiny iron nails, pins etc.</p> <p>(iii) Tinning : It is the process of giving a coating of tin, i.e., molten tin over other metal. Eg. : Cooking vessels, made of copper and brass get a greenish coating due to corrosion. This greenish coating is poisonous. Therefore they are given a coating of tin to prevent corrosion. (Kalhai)</p> <p>(iv) Electroplating : In this method a metal is covered with another metal using electrolysis. Silver-plated spoons, gold-plated</p>	<p>3</p>

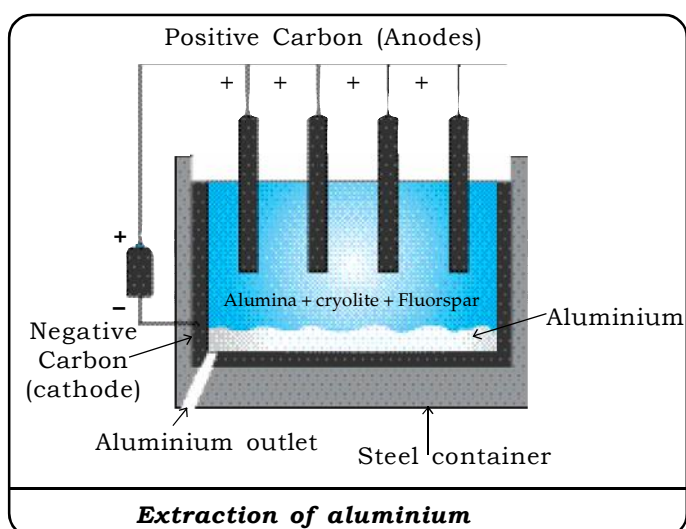
jewellery, etc, are electroplated.

- (v) Anodizing : In this method metals like copper and aluminum are electrically coated with a thin strong film of their oxides. This film protects the metals from corrosion.
- (vi) Alloying : An alloy is a homogenous mixture of two or more metals or a metal and a non-metal in a definite proportion. The resultant metals called alloys do not corrode easily, e.g. stainless steel.

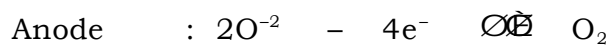
Name of Alloy	Constituent elements.
(a) Brass	copper and zinc
(b) Bronze	copper and tin
(c) Stainless steel	iron, nickel and chromium

If one of the metal is mercury, then the alloy is known as an amalgam.

(2)



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(3)

- (i) propan-1-ol
 (ii) methanoic acid
 (iii) but - 2 - ene

1

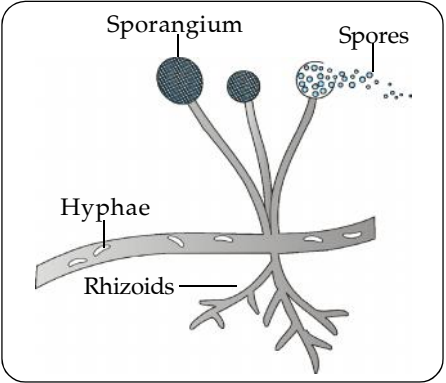
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(4)

- (i) Coughing - Involuntary
 (ii) Food getting digested - Involuntary
 (iii) Moving a table - Voluntary

 $\frac{1}{2}$ $\frac{1}{2}$ $\frac{1}{2}$

	<p>(iv) Beating of heart - Involuntary</p> <p>(v) Release of hormones into blood - Involuntary</p> <p>(vi) Flying a kite - Voluntary</p>	<p>$\frac{1}{2}$</p> <p>$\frac{1}{2}$</p> <p>$\frac{1}{2}$</p>
(5)	<p>(i) Certain movements of plants do not result in their growth and are termed as growth independent movements.</p> <p>(ii) Hormones bring about various movements in plants in response to the changes occurring in their surroundings.</p> <p>(iii) These movements also happen at a place different from the place of touch. This means that the information that a touch has occurred, has been communicated. e.g. Closing of leaflets of Mimosa on touch.</p> <p>(iv) Plants use electrochemical means to transfer information from cell to another as there is no specialized tissue for the conduction of information.</p> <p>(v) Then the movement is brought about as the plant cells change their shapes by altering the amount of water in them. By this the cells either swell or shrink and thus change their shape.</p> <p>(vi) Some other movements seen in plants which are growth independent are - lotus opens in the morning and the tube rose opens at night, the tentacles on the leaves of the insectivorous plants like Drosera curl inwards at the touch of an insect and trap the insect, the explosive fruit of balsam plant bursts open at appropriate time thus scattering the seeds.</p> <p>(vii) Another example is - the Venus flytrap which looks and smells like a flower to insects. When they land on it they touch a trigger hair which slams the trap shut and they are digested by the plant.</p>	3
(6)	<p>(i) The hyphae of bread mould (Mucor) are thread like structures.</p> <p>(ii) The mould forms spores inside the sporangium.</p> <p>(iii) When the spores are ready to leave the sporangium, they break open.</p> <p>(iv) If they land in a moist place, they germinate to form new moulds.</p>	 <p>3</p>

