

**SUMMATIVE ASSESSMENT - II (2015-16)**  
**SCIENCE**  
**Class - X**

Date - 08.03.16  
 Time allowed : 3 hours

Maximum Marks : 90

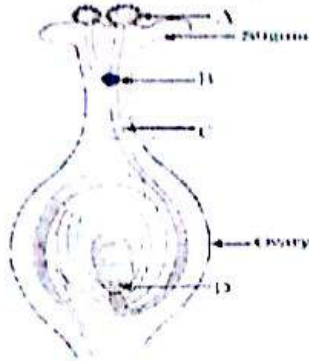
**General Instructions :**

- (i) The question paper comprises of two Sections, A and B. You are to attempt both the sections.
- (ii) All questions are compulsory.
- (iii) There is no choice in any of the questions.
- (iv) All questions of Section-A and all questions of Section-B are to be attempted separately.
- (v) Question numbers 1 to 3 in Section-A are one mark questions. These are to be answered in one word or in one sentence.
- (vi) Question numbers 4 to 6 in Section-A are two marks questions. These are to be answered in about 30 words each.
- (vii) Question numbers 7 to 18 in Section-A are three marks questions. These are to be answered in about 50 words each.
- (viii) Question numbers 19 to 24 in Section-A are five marks questions. These are to be answered in about 70 words each.
- (ix) Question numbers 25 to 33 in Section-B are multiple choice questions based on practical skills. Each question is a one mark question. You are to select one most appropriate response out of the four provided to you.
- (x) Question numbers 34 to 36 in Section-B are questions based on practical skills. Each question is a two mark question.

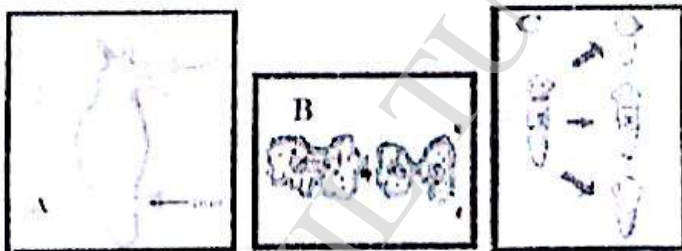
**SECTION-A**

- |   |   |   |   |
|---|---|---|---|
| C | 1 | State the reason why covalent compounds are generally poor conductor of electricity ?   | 1 |
| B | 2 | Why is it, that asexual reproduction produces exact copies, but sometimes minor variations are also seen in next progeny ?  | 1 |
| B | 3 | Name two chemicals which are responsible for thinning of ozone layer.   | 1 |
| P | 4 | A person is able to see objects clearly only when these are lying at distances between 50 cm and 300 cm from his eye. Identify the kind of defects of vision he is suffering from. Give reason for your answer. | 2 |
| B | 5 | How are large dams built on rivers advantageous to us ? Give any two advantages ?   | 2 |
| B | 6 | Accumulation of harmful chemicals in our bodies can be avoided. Explain how this can be achieved.   | 2 |
| C | 7 | What are oxidizing agents ? State any two oxidizing agents. Write one chemical equation using oxidizing agent.  | 3 |
| C | 8 | Lithium, sodium and potassium are placed in the same group on the basis of their similar properties. List three similar properties of these elements.   | 3 |

- 2 9 What do you understand by hydrocarbons ? Stating the general formula for alkenes with write the formula for an alkene with five carbon atoms. Draw the structural formula for this alkene. 3
- 2 10 What are metalloids ? Where are they placed in the periodic table ? Give two examples of metalloids. 3
- 3 11 An organ like a wing in birds are an advantage to the organism. Did they appear in different stages or were formed due to a single sudden change in them ? 3
- B 12 In the diagram given below 3  
 (a) Label parts A to D.  
 (b) Define the process depicted in it



- B 13 What will happen if both the characters present in F1 generation pass together in F2 generation? 3
- B 14 Identify from the diagram -the type of reproduction used and the organism showing it. 3



- B 15 (a) How would you relate the following methods to asexual reproduction ? 3  
 (i) Binary fission  
 (ii) Spore formation  
 (b) State any one advantage of using sexual reproduction over asexual reproduction.
- P 16 (a) Name the part of eye that : 3  
 (i) Controls the amount of light entering into eye  
 (ii) Regulates the size of the passage through which light enters  
 (b) Why are we not able to see immediately after we enter a dark hall from a lighted place?
- P 17 (a) Mention the nature of image produced by a plane mirror. 3



- (e) The magnification produced by a plane mirror is  $m = +1$ . What does this mean? 3
- B 18 As the number of vehicles on the road is increasing, so is the combustion of fossil fuels, which is leading to air pollution. Emission of  $\text{CO}_2$  is causing greenhouse effect which has resulted in global warming. 3  
 (i) Suggest four ways to minimise the consumption of fossil fuels at individual level.  
 (ii) What values we must have to be environmental friendly?
- C 19 Write the common name of ethanoic acid and the functional group present in it. Explain any of its three Chemical properties with chemical equation for each. 5
- B 20 (a) Explain whether traits like eye colour or height is genetically inherited. Do power to lift weights and reading french also belong to the same category? 5  
 (b) How do variations affect the evolution of those organisms that reproduce sexually?
- B 21 (a) The two cells formed after DNA copying are similar but not identical. What reason can be associated for this? 5  
 (b) Variation though leads to certain changes in an individual but is useful for the survival of species over time. Justify this statement.  
 (c) Is the consistency of DNA copying important during reproduction?
- P 22 Draw a ray diagram showing refraction of light through a glass prism and mark the following: 5  
 (a) Incident ray (b) Emergent ray  
 (c) Refracted ray (d) Angle of incidence  
 (e) Angle of deviation (f) Angle of emergence
- P 23 (a) Define principal focus and focal length of a lens with the help of ray diagrams for both type of lenses. 5  
 (b) An object is placed between F and 2 F of a concave lens. Draw a ray diagram to show how image is formed?  
 (c) Explain why while using convex lens and sun as the object a paper can be burnt?
- P 24 With the help of a ray diagram, state and explain the laws of reflection of light at a plane mirror. Mark the angle of incidence and reflection clearly on the diagram. If the angle of incidence is  $32.5^\circ$  what will be the angle of reflection? 5

#### SECTION - B

- 25 For complete precipitation of soap from the hot mixture of vegetable oil and NaOH, which of the following salt is added? 1  
 (a) Calcium chloride (b) Sodium chloride  
 (c) Magnesium chloride (d) Aluminium chloride
- 26 Name the process which occurs when alkaline hydrolysis of coconut oil is done. 1  
 (a) oxidation (b) hydrolysis  
 (c) saponification (d) reduction
- 27 The cleansing action of soap is more in soft water as it : 1  
 (a) is free from microbes (b) does not have salts in it  
 (c) has impurities (d) has dissolved salts



