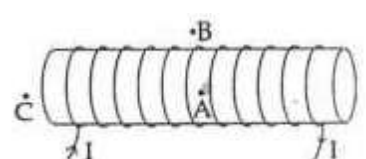


SUMMATIVE ASSESSMENT - I, 2016-17, SCIENCE Class — X (Code: YY4W1EV) Question Paper - 2

## SECTION-A

1. Mention the raw materials required for photosynthesis
2. Mention two reasons why tungsten is used for making filament of electric bulb.
3. Mention the minimum temperature difference required between surface water and at depths of up to 2 km in an ocean thermal energy plant
4. Define a balanced chemical equation. Why should chemical equations be balanced?
5. Name the gas which evolved when an acid reacts with metal. Illustrate with an example. How will you test the presence of this gas?
6. Define phototropism. Name the plant hormone which is responsible for phototropism.
7. Define chemical equation. What is an unbalanced chemical equation called? Which law governs the balancing of a chemical equation? State It
8. In one of the industrial processes used for manufacture of sodium hydroxide, a gas 'X' is formed as by product. The gas X react with dry slaked to give a compound Y which is used as a bleaching agent in textile industry  
(i) Identify 'X' and .Y (ii) Give chemical equation of the reaction involved
9. Differentiate between the following with suitable examples:  
(i) Mineral and ore (ii) corrosion and rancidity (iii) malleability and ductility
10. A white coloured powder is used by doctors for supporting fractured bones  
(a) Write chemical name and formula of the powder  
(b) When this white powder is mixed with water a hard solid mass is obtained. Write balanced chemical equation for this change.
11. Write three points of difference between breathing and respiration
12. List the sequences of events that occur when a plant is exposed to unidirectional light, leading to bending of a growing shoot. Also name the hormone synthesised and the type of movement that takes place.
13. Draw a neat diagram of excretory system of human beings, and Label on it (i) Left kidney (ii) Urinary bladder
14. What is meant by "electric Resistance" Of a conductor? How is it determined? Name and define its SI unit.
15. For the current carrying solenoid as shown below, draw magnetic field lines and giving reason explain that out of the three points A, B and C at which point the field strength is maximum and at which point it is minimum.  

16. What are magnetic field lines? Justify the following statements  
(a) Two magnetic field lines never intersect each other (b) Magnetic field lines are closed curves
17. Nikhil and Neha went to a remote village in Kerala to meet their grandmother. They were surprised to see a biogas plant in Mr. Nair's house in the neighbourhood. There were plenty of live stocks and the household used cooking gas from the plant. Also their farm had rich vegetation. They contacted sarpanch of the village and convinced him to set up a biogas plant for village community. (a) Mention the values displayed by Mr. Nair, Nikhil and Neha (b) Explain the possible arguments given by Nikhil and Neha to the Sarpanch to convince him to set up community biogas plant.
18. Write any three ways in which construction of dams for production of electricity adversely affect the environment of that place.
19. Give reasons for the following: (i) Carbon is not used for obtaining aluminium from aluminium oxide.  
(ii) Potassium is kept immersed in kerosene oil. (iii) Metals conduct electricity.

(iv) Tungsten is used for making filaments of bulbs. (v) Shining surface of metals is tarnished after sometime.

20. (a) Can we stir silver nitrate solution with a copper spoon? Why or why not? Support reason.

(b) Why a brown coating is formed on the iron rod when iron rod is kept dipped in copper sulphate solution for some time? What change will be observed in the colour of the solution?

(c) A green coating develops on the copper vessel in the rainy season. Why?

21. (a) State the form in which the following are stored (i) Unused carbohydrates in plants (ii) The energy derived from food in humans (b) Describe the process of nutrition in amoeba with the help diagram.

22. (a) Name an instrument that measures current in a circuit. Define unit of electric

(b) What are the following symbols mean in an electric circuit



(c) Draw a closed circuit diagram consisting of 0.5 m long nichrome wire XY, an ammeter, a voltmeter, four cells of 1.5 V and a plug key.

23. (a) Describe an activity with a labelled diagram to show that a current-carrying conductor experiences a force in a magnetic field.

(b) State the rule used to determine the direction of this force.

24. (a) Write two points of difference between electric energy and electric power.

(b) Out of 60 W and 40 W lamps, which one has a higher electrical resistance when in use?

(c) What is the commercial unit of electric energy? Convert it into Joules.

25. The correct order for increasing values of pH for water, lemon juice and NaOH solution will be:

(a) Water < lemon juice < NaOH solution

(b) lemon juice < NaOH solution < water

(c) lemon juice < water < NaOH solution

(d) NaOH solution < water < lemon juice.

26. A drop of colourless liquid is poured over blue litmus paper and it turns red. The colourless liquid is

(a) Sodium hydroxide solution (b) sodium bicarbonate solution (c) pure water (d) dilute hydrochloric acid

27. Raman studied the chemical properties of hydrochloric acid in the laboratory and observations reported by him are as follows:

(i) it turns red litmus blue

(ii) It reacts with zinc and a gas is evolved.

(iii) it reacts with solid sodium carbonate to give brisk effervescence.

(iv) It turns blue litmus red.

The correct set of observations is:

(a) (i) and (iv) only

(b) (i), (iii) and (iv) only

(c) (i) and (iii) only

(d) (ii), (iii) and (iv) only

28. When zinc reacts with an aqueous solution of copper sulphate, the observations are

(a) Formation of colourless solution; reddish-brown deposits

(b) Formation of blue solution; reddish-brown deposits

(c) Formation of green solution; reddish-brown deposit.

(d) Formation of reddish-brown solution; no deposits.

29. If the metals A, B, C and D are arranged on the basis of their reactivity as  $A > B > C > D$ , then the statement which will not hold good will be

(a) D cannot displace C from its salt solution

(b) A can displace B from its salt solution

(c) A will not react with C

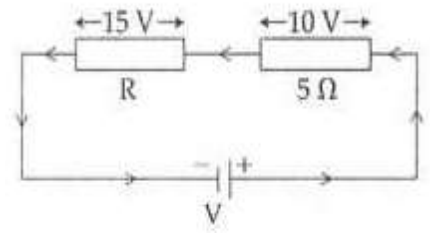
(d) B can undergo oxidation when placed in a salt solution of D

30 Two resistances are connected in series as shown in the diagram, The current flowing through R will be :

- (a) 5A    (b) 1 A    (c) 15 A    (d) 2 A

31 Two wires of resistances R<sub>1</sub> and R<sub>2</sub> are joined in parallel, The equivalent resistances of the combination is

- (a)  $\frac{R_1 R_2}{R_1 + R_2}$  (b)  $R_1 + R_2$  (c)  $R_1 \times R_2$  (d)  $\frac{R_1}{R_2}$



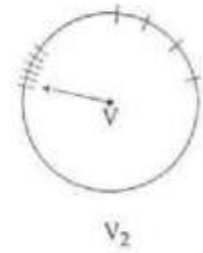
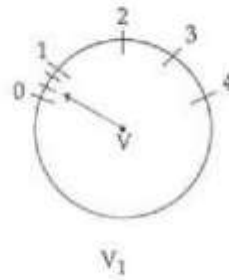
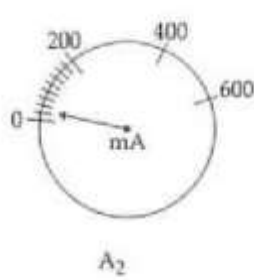
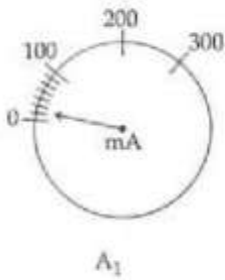
32. The photosynthetic pigments are located in (a) chloroplasts (b) leucoplast (c) Nucleus (d) ribosome

33. In the experiment to show that CO<sub>2</sub> is released during respiration, the solution in the test tube is chemically

- (a) NaOH    (b) KOH    (c) NaCl    (d) KCl

34. One student was assigned the experiment of interaction of Iron nail with a solution of copper sulphate. What observations he/she would have recorded as-per given below: (i) Initial colour of the solution. (ii) Final colour of the solution. (iii) Change in the colour of iron nail. Mention the type of this reaction.

35. In diagrams given below two voltmeters and two milliammeter are shown. To verify ohm's law what should be the correct choice for voltmeter and milliammeter.



(i) Correct milliammeter A<sub>1</sub> or A<sub>2</sub> (ii) Correct voltmeters V<sub>1</sub> or V<sub>2</sub>. Give reason for your answer

36 A student prepared the temporary mount of stained leaf peel. After observing the slide under microscope, he drew the following sketch. Identify and name the parts labelled as .A, B, C and D.

