**SUMMATIVE ASSESSMENT - I, 2016-17, SCIENCE Class — X (Code: D7VI75H) Question Paper - 3**

**SECTION - A**

1. Mention the site of complete digestion of carbohydrates, proteins and fats in humans.

2. Mention the commercial unit of electric energy. Write its relation with joule.

3. What are hot spots inside earth's crust ?

4.What is meant by amphoteric oxides? Choose the amphoteric oxide from the following $Na_2O$, ZnO, $CO_2$ ,$Al_20_3$,$H_2O$

5.On heating copper powder in air the surface of copper powder becomes coated with black CuO. How can this black coating, be converted into brown copper ? Write chemical equation for the reaction that occurs during the colour change.

6. How is the timing and the amount of hormone secreted by a gland regulated? Explain with an example,

7. Define the term decomposition reaction. Give one example each of thermal decomposition and electrolytic decomposition.

8. What is chlor-alkali process ? Write the chemical reaction taking place in the form of a balanced chemical equation. Name the gases liberated at the cathode and at the anode respectively.

9.State what would happen if : (i) some zinc pieces are placed in blue copper sulphate solution.(ii) some copper pieces are placed in green ferrous sulphate solution. (iii) an iron nail Is dipped in a solution of Copper sulphate for some time.

10. Complete and balance the following chemical equations:

(i) $K_2CO_3$ + HCI ----------> (ii) CuO + HCI -------->4 (iii) Fe + HCI ---->

11. State the difference between transport of materials in xylem and phloem.

12. Name the hormone required for the following. Also mention the name of endocrine gland from which that hormone is secreted ;

(i) Lowering of blood glucose (ii) Development of moustache and beard in human males

(iii) Metabolism of carbohydrates, fats end proteins.

13. Name the part of the brain which controls the following:

(i) Walking in a straight line(ii) Change in the size of the pupil (iii) Blood pressure

14. An electric heater is used on 220 V supply and takes a current of 5 A. What is its power ? Calculate the per hour cost of using the heater if 1 unit costs. Rs. 6.0.

15. Explain the use of an electric fuse. What type of material is used for fuse wire and why?

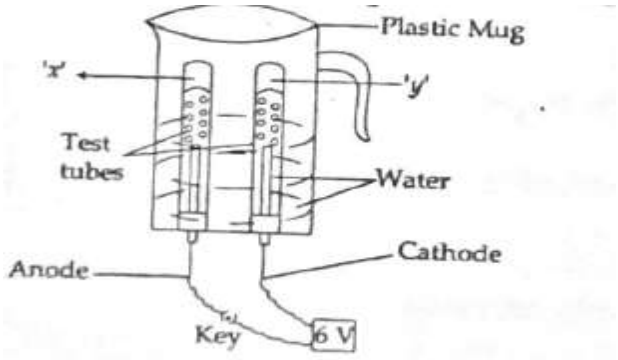
16. State Maxwell's right hand grip rule giving diagram. A straight conductor placed horizontally is carrying current from west to east. What will be the direction of magnetic field lines around it?

**17.** All Traffic jams, outside the school gate was a common sight since most of the students came on their own cars. This became a topic for discussion on every PTA, meeting, On one such P.T. A meeting, the principal pointed out the examples of four of their teachers who were car pooling for the past several years. She asked the parents also to adopt this method to sort out the problem.

(a) List two values shown by the teachers mentioned by the Principal (b) Explain two advantages that will occur if more parents emulated the example of these teachers.

18. Explain how hydroelectricity is produced.

19. Study the following diagram and answer the questions that follow :




(i) What does this activity indicate ?

(ii) Identify the x and y in the test tubes.

(iii) Why is the amount of y collected in one of the test tubes is double of the amount of 'x' collected in the other ?

(iv) Write balanced chemical equation of the reaction that takes place when electric current is passed on closing the key.

20. (a) Define pH scale, Draw a figure showing variation of pH with the change in concentration of $H^+$ and $OH^-$ ions.

(b) Mention the range of pH of acidic solution, basic solution and neutral solution respectively.

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 of diagram.

22. (a) How two resistors, with resistances $R_1\Omega$ and $R_2\Omega$ respectively are to be connected to a battery of emf. V volts to obtain maximum current flowing through it?

(b) In a house 3 bulbs of 100 watt each lighted for 5 hours daily, 2 fans of 50 watt each used for 10 hours daily and an electric heater of 1.00 kW is used for half an hour daily Calculate the total energy consumed in a month of 31 days and its cost at the rate of Z 3.60 per KWh

23. Describe an activity with labelled diagram to show magnetic field lilies around a current carrying loop, List the factors on which the field at a point depends.

24. (a) State the function of 'a fuse' in an electric circuit. How is it connected in the domestic circuit?

(b) An electric fuse of rating 3A is connected in a circuit in which an electric iron of power 1.5 kilo watt is connected which operates at 220 V. What would happen? Explain.

SECTION B

25. Four solution (i) ,(ii),(iii) and IV were given to a student to test their acidic or basic nature using pH paper. He observed that when the pH paper is dipped in these four solutions separately the colour of pH paper turned to Red, Blue, Green and Orange respectively. The coliva conclusion of this observation would be

(a) I, II, Ill are acidic (b) I and IV are acidic (c) II, III and IV are basic (d) II and IV are basic

26. During an experiment a student was provided a sample solution to find the pH value. He added a few drops of universal indicator to it and observed that the colour changed to green. The sample should be of:

(a) Sodium bicarbonate solution (b) Distilled water (c) Dilute hydrochloric acid (d) Lemon juice

27. A student added granulated zinc in dil hydrochloric acid taken in a test tube. The correct observation made by her is : (a) The surface of the utetal turns shining, (b) The reactions mixture turns milky.

(c) The odour of chlorine is observed. (d) A colourless and odourless gas evolved with bubbles

28. If A + MX -----> AX + M and AX is green coloured solution, then A and MX respectively are :

(a) Zinc and ferrous sulphate (b) Zinc and copper sulphate

(c) Aluminium and copper sulphate (d) Iron arid copper sulphate '

29.If M + MX + B and B is seen as reddish brown deposit, then M and BX respectively are

(a) Iron and aluminium sulphate (b) Iron and zinc sulphate

(c) Aluminimum and copper sulphate (d) Zinc and Iron Aluminium sulphate

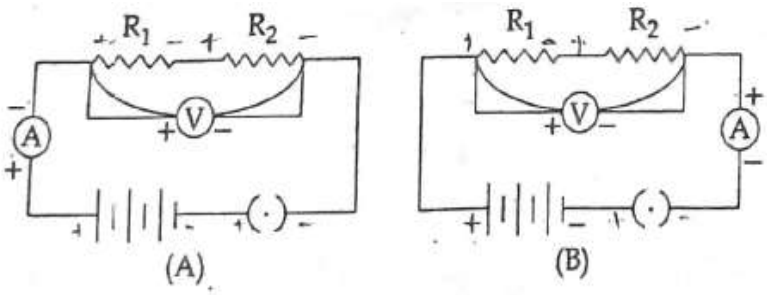
30. To find the equivalent resistance of two resistors connected in series, the connection of ammeter is correct in the circuit:

(a) Circuit A

(b) Circuit B

(c) Both the circuits

(d) Neither of the two circuits




31. When two or more resistors are connected in parallel to a battery :

(a) The Voltage across each resistor is the same

(b) The total current flowing from the battery equals to the sum of the currents flowing through each resistor

(c) The equivalent resistance of the combination is less than the resistance of any one of the resistors

(d). All of the above

32. The need of iodine in the experiment to show that light is necessary for the process of photosynthesis is :

(a) to test the presence of starch in the leaves. (b) to decolourise the leaf.

(c) to sterilize the leaf. (d) to make leaves soft.

33. Mention the precautions to be taken for successful performance of experiment to show that $CO_2$ is given out during respiration'

(A) Cork should be air tight (B) Seeds in the flask should be dry (C) The delivery tube should be above water

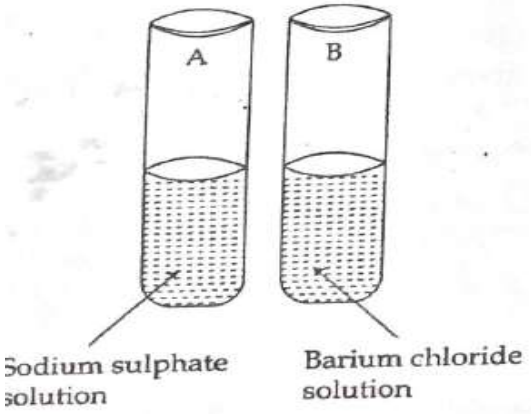
(D) The small tube with freshly prepared KOH solution should be placed in the flask

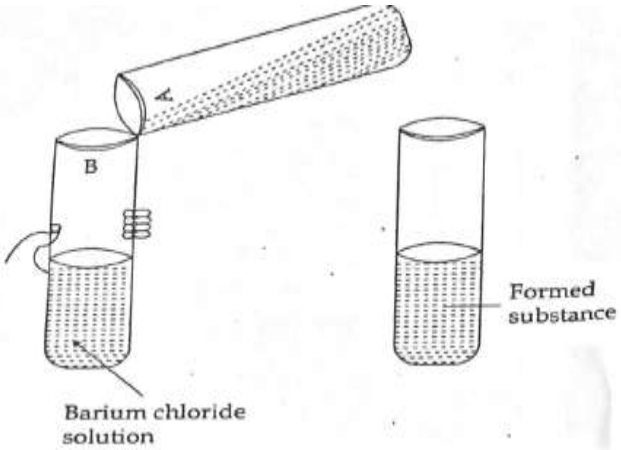
(a) (A) and (B) (b) (A) (3) and (C) (c) (A) (C) and (D) (d) (A) and (ID)

34.Take 4 ml solution of sodium sulphate infest tube A and 4 ml solution of barium chloride in test tube B. Now pour the solution of test-tube A in the solution of test tube B, as shown in the figure :

(i) What would you observe when they are mixed together ?

(ii) Name the substances formed after exchanging the ions of the two solutions A and B.




35. Enlist the materials required for the experimental set up to verify ohm's law.

36. Write correct sequence of four steps of method for the preparation of temporary mount of a stained leaf peel.