SUMMATIVE ASSESSMENT – I, 2016-17 VV75PTT

SCIENCE

Class – X

Time Allowed : 3 hours Maximum Marks : 90

SECTION - A

1. Name one plant hormone which inhibits growth. write its one more function.

2. Draw a diagram to show magnetic field in given region.

3. Define the process of nuclear fission.

4. List two observations which you record while magnesium burning in air

5. Name the gas which is liberated when an acid reacts with a metal. Illustrate with an example. How will you test the presence of this gas .

6. How is the small Intestine designed to absorb digested food ?

7. State one example each .characterised by the following along with the chemical equation

(I) Change in state (ii) Evolution of gas. (iii) Change in temperature.

8. Write the chemical name and formula of bleaching powder. How is it Prepared? Write the chemical equation and state any two uses of bleaching powder.

9 . Write chemical equations for the following reactions:

(i) When zinc carbonate is calcined ?

(ii) When manganese dioxide is heated with aluminium powder.

(iii) When magnesium is treated with very dilute nitric acid.

10. You are provided with three test tubes A, B and C which contain distil, water, acidic solution and basic solution respectively. If you are given blue litmus paper only, how will you identify the contents of each test.

11. If all the leaves of a healthy potted plant arc covered with Vaseline, will the plant remain healthy for long time. Explain your answer with reason.

12. Draw a nerve cell and label on it the following Nucleus, Dendrite, Axon

13. Define excretion. Write two vital functions of kidney.

14. A current of 5 amperes is passed through a conductor of 12 ohms for 2 minutes. Calculate the amount oh heat produced?

15. State the purpose for which the following rules are used:

(i) Right hand thumb rule (ii) Fleming's Left hand rule (iii) Fleming's right hand rule

16. The potential difference between to two terminals of an electric iron is 220V and the current flowing through its element is 5. A. Calculate the resistance and wattage of the electric iron

17. Ravi was using calculator to do some calculations. While doing so his calculator stopped working. He kept the calculator near the window for some time, exposed to sunlight. After some time he could use the calculator again. His friend Mohit who was using a battery operated

calculator, watched him and told him that his calculator was better in the sense that he could immediately recharge calculator, by charging battery but Ravi was not convinced. He explained to Mohit the advantages of solar calculator and convinced him to adopt it.

(a) State the values exhibited by Ravi.

(b) List the advantages of using a calculator driven by solar energy which convinced Mohit too to adopt it .

18. Explain the term 'Tidal energy. How electricity produced from tidal energy?

19. (a) Define universal indicator. For what purpose it is used? (b) Two solutions A and B have pH values of 3.0 and 9.5 respectively. Which of these will turn litmus solution from blue to red and which will sum phenolphthalein from colourless to pink, (c) Water is a neutral substance. What colour will you get when you add a few drops of universal indicator to a test tube containing distilled water?

20 (a) Identify the type of reactions taking place In each of the following cases and write the balanced chemical equations for the reactions

(i) Barium chloride solution is mix, with copper sulphate solution and a white precipitate is obtain,

(ii) On heating copper powder in air, the surface of the copper powder turns black.

(b) What happens when hydrogen gas is pass, over the heated copper oxide? Write the chemical equation involved in this reaction

21. What are animal hormones List their two characteristics.

Name the hormone (i) which bring change in male humans during the beginning of adolescence.

(ii) Which coordinates the level of sugar in blood?

22. (a) Distinguish between the terms electrical resistance and resistivity of conductor?

(b) A copper wire of resistivity 1.63 $x10^{-8}$, ohm meter has cross section area of 10.3 x 10^{-4} cm^2, Calculate the length of the wire required to make a 20 ohm coil.

23.(a) Describe an activity to obtain magnetic field line around current carrying straight conductor?

(b) State the rule used to find the direction of this magnetic field. (c) How does magnitude of magnetic field depend on current now through conductor

24. (a) Heating elernents of electrical heating devices is made up of an alloy rather than a pure metal. Give two reasons.

(b) Four resistors of 4 Ω each are joined end to end to form a square Calculate the equivalent resistance of the combination between two adjacent corner?

SECTION - B

25 A student took 5 ml of lemon juice in each of tubes A, B and C. She added 5 ml of water in A and 20 nil of water in B. She tested the pH value of all the three tubes. She would find that pH value of liquid : (a) in A, B and C is same (b) A is more than that B and C

(c) B is more than that A and C (d) C is more than that in A and B

26 pH of pure water : (a) 6 (b) 7 (c) 8 (d) 9

27.In which form zinc metal Is used in laboratory to prepare hydrogen?

(a) Rod b) Powder (c) Filling (d) Granules

28 Four metal rods labelled as P, Q. R and S along with their corresponding colours are shown below. Which of these rod could be made up of aluminium

(a) Reddish brown (b) Blackish gray (c) Dark gray (d) Silvery white

29. Sarkthak took two test tube, A and B containing Pale green solutions and blue, respectively. Respective solutions taken in A and B are: -

(a) ZnSO4 solution, CuSO4 solution (b) CuSO4 solution, $FeSO_4$ solution

. (d) $Al_2(SO_4)_2$ solution , FeSO4 solution (d) FeSO4 solution, $CuSO_4$ solution

30 Total voltages across the series combination of resistor is

(a) Same in every part of the circuit (b) Sum of the voltage drop across each resistor

(c) Inversely proportional to the resistance (d) None of these

31 Two unequal resistances are connected in parallel by a student. Which of the following is trueI

(a) Current is same is both (b) Current is larger in higher resistance

(c) Voltage drop is some across both (d) Voltage drop is lower in lower resistance.

32 The teacher instructed a student to place a healthy potted plant in a darkroom for 24 hours prior to an experiment on photosynthesis. The purpose of placing it in a darkroom is :

(a) To increase the intake of CO_2 (b) To activate the chloroplast in the Leaves

(c) To destarch the leaves (d) to denature the enzyme in leaves

33 The KOH solution used in the experiment to show that 'CO_2, Is given out during respiration' should he prepared:

(a) Fresh (b) two days before the experiment

(c) Five days before the experiment (d) just one day before the experiment

34 . The following given statements have been written to study the type of reaction, but they are not correct, you have to rewrite .them making necessary corrections.

(i,) To study the displacement reactions copper, turnings were added in the inn sulphate solution.

(ii) To study the double displacement reaction solid sodium sulphate was mixed with solid barium chloride and a yellow colour precipitate was obtained.

35. To maintain a steady current in a circuit, select two necessary conditions from the follow.,

(i) Continuous circuit (ii) development of potential difference

(iii) Neither (i) nor (ii) (iv) Only option (i)

36. Explain why only turgid leaf is selected for the preparation of temporary mount of a leaf peal?