

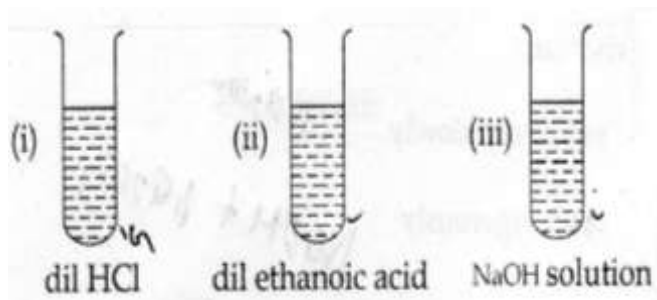
SUMMETIVE ASSESSMENT- I, 2016-17 SCIENCE CLASS 10 - (SDV) (8R33NAT) Question paper -1

1. State the location and function of gastric glands.
- 2 Power of a lamp is 60 W, Find the energy in joules consumed by it in 1s.
3. Name any two conventional sources of energy.
- 4 Reverse of the following chemical reaction is not possible:
$$\text{Zn} + \text{CuSO}_4 \longrightarrow \text{ZnSO}_4 + \text{Cu}$$
 Justify this statement with reason.
5. Write the chemical formula of Bleaching powder. How is bleaching powder prepared ? For what purpose is it used in drinking water ?
6. Define neuron. Name the parts of the neuron where (i) information is acquired (ii) impulse must be converted into a chemical signal for onward transmission
7. 2g ferrous sulphate crystals are heated in a dry bailing tube. (I) List any two observations. (ii) Name the type of chemical reaction taking place. (iii) Write the chemical equation of the reaction.
8. 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.
- 9 . Give reason for the following
 - (i) Hydrogen gas is not evolved when most metals react with nitric acid
 - (ii) Zinc oxide is considered as an amphoteric oxide.
 - (iii) Metals conduct electricity.
- 10 (a) A solution of Potassium chloride when mixed with silver nitrate solution, an insoluble white substance is formed. Write the chemical reaction involved and also mention the type of the chemical reaction.
(b) Ferrous sulphate when heated, decomposes with the evolution of a gas having a characteristic odour of burning sulphur, Write the chemical reaction involved and identify the type of reaction.
11. Describe heterotrophic mode of nutrition and give its examples- Name the three types of this nutrition,
12. Give reason to explain why endocrine glands release their secretions into the blood directly.
13. Explain the structure of bronchi with the help of a neat diagram and label on it (I) trachea (ii) bronchiole
- 14 An electric iron has a rating of 750 W ; 200 V. Calculate (i) the current required. (ii) the resistance of its heating element. (iii) energy consumed by the iron in 2 hours.
15. 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.
16. Explain the use of an electric fuse. What type of material is used for fuse wire and why?
17. Hemant visited his neighbouring village where a biogas plant has been installed recently. He was very surprised to see the working of the biogas plant. He told his village elders about the advantages of setting up, a biogas plant in their village. Now answer the following questions
 - (i) What are the advantages of a biogas plant (any two)
 - (ii) Why is a biogas plant commonly called as 'gobar gas' plant?
 - (iii) Why were the villagers very much impressed with Hemant ?
18. Define the process of nuclear fission. Write the steps involved in generating electricity in a nuclear reactor.
19. Draw a schematic diagram of the various steps involved in the extraction of metal from ores for metals of medium reactivity and for metals of low reactivity.
20. (a) illustrate an activity to investigate whether all compounds containing hydrogen are acidic,
(b) What happens when hydrochloric acid and sodium hydroxide are dissolved in water? Explain giving equation of each.
21. What are plant hormones ? Give four different types of plant hormones and state their functions briefly.
- 22 State Ohm's law. Draw a labelled circuit diagram to verify this law in the laboratory. If you draw a graph between the potential difference and current flowing through a metallic conductor, what kind of curve will you get ? Explain how would you use this graph to determine the resistance of the conductor.
- 23 (a) Draw the magnetic field lines through and around a single loop of wire carrying electric current.
(b) State whether an alpha particle will experience any force in a magnetic field if (alpha particles are positively charged particles)
 - (i) it is placed in the field at rest.
 - (ii) moves in the magnetic field parallel to field lines.
 - (iii) it moves in the magnetic field perpendicular to field lines. Justify your answer in each case.

24 What are magnetic field lines ? List three characteristics of these lines, Describe in brief an activity to study the magnetic field lines due to a current flowing in a circular coil.

SECTION - B

25. Given below are diagrams of three test tubes containing dil. HCl, dil. Ethanoic acid and NaOH solution. Choose the correct statement :



- (a) pH of I is greater than pH of II and III
- (b) pH of III is greater than pH of I and II
- (c) pH of I, II, III is equal.
- (d) pH of II is greater than pH of I and III

26. A student was provided a sodium bicarbonate solution to determine its pH value, He put a few drops of this solution on the pH strip and observed that it :

- (a) turned blue
- (b) had no change
- (c) turned red
- (d) turned green

27 Dilute NaOH solution and solid sodium carbonate:

- (a) react only on heating
- (b) react very slowly
- (c) do not react
- (d) react vigorously

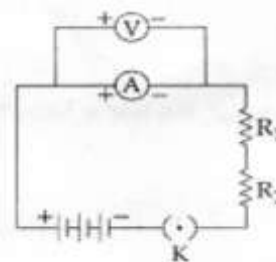
28. Reddish - brown deposits will be seen on aluminium strip when it reacts with an aqueous solution of :

- (a) $ZnSO_4$
- (b) $Al_2(SO_4)_3$
- (c) $CuSO_4$
- (d) $FeSO_4$

29 The set of metal and chemical which will not react together is :

- (a) $Zn(s), FeSO_4(aq)$
- (b) $Zn(s), CuSO_4(aq)$
- (c) $Al(s), FeSO_4(aq)$
- (d) $Fe(s), ZnSO_4(aq)$

30 To find the equivalent resistance of a series combination of two resistors R_1 and R_2 , a student uses the circuit diagram shown below :



Circuit will give

- (a) correct reading of voltage V, but incorrect reading for current I
- (b) correct reading of current I but incorrect reading of voltage V.
- (c) correct reading for both current I and voltage V
- (d) Incorrect reading for both current I and voltage V.

31. Resistors of 1Ω And 100Ω are arranged in parallel. The resultant resistance will be

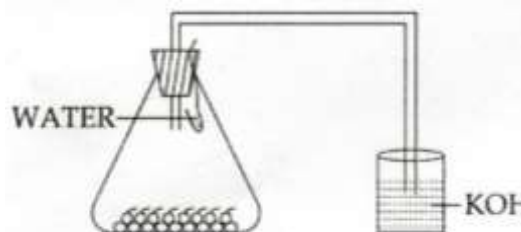
- (a) More than 100Ω
- (b) Less than 100Ω
- (c) not less than 1Ω
- (d) More than 10 but not more than 1000

32. In an experiment to show that 'sunlight is necessary for photosynthesis, the leaf is boiled in alcohol for few minutes using a water bath. It is essential because:

- (a) Alcohol is highly volatile
- (b) Steam from the water bath heats the leaf rapidly
- (c) Steam from the water dissolves the chlorophyll
- (d) Alcohol is flammable

33. Taha, while setting up the experiment to show that CO_2 is evolved during respiration committed some errors, as shown in the figure below. The change in the set up that will give correct results is :

- (a) KOH solution should be taken in the small test tube inside the flask and germinating seeds in the beaker.
- (b) Water should be taken in the beaker and KOH solution in the flask,
- (c) KOH solution should be taken in the flask and water should be taken in the small test tube.
- (d) KOH solution should be taken in the small test tube and water in the beaker.



34. A student added water to quick lime kept in a beaker. State the conclusions he would draw, 2 about the chemical reaction that takes place, on the basis of his observation. 2

35 State four factors that affect resistance. 2

36 You have been provided with a freshly plucked leaf of Rhea or lily. What will you do to 2 obtain the transparent leaf peel ? 2