

KENDRIYA VIDYALAYA SANGATHAN, ERNAKULAM REGION
SUMMATIVE ASSESSMENT - 1 (2016 - 17)

Class : X

SCIENCE

Time : 3 Hrs

M. M. : 90

General Instructions :

1. The question paper comprises of two sections, A and B, you are to attempt both the sections.
2. All the questions are compulsory.
3. There is no overall choice.
4. All questions of section A and all questions of Section B are to be attempted separately.
5. Question numbers 1 to 3 in Section A are one mark question. These are to be answered in one word or one sentence.
6. Question numbers 4 to 6 are two marks questions, to be answered in about 30 words.
7. Question numbers 7 to 18 are three marks questions, to be answered in about 50 words.
8. Question numbers 19 to 24 are five marks questions, to be answered in about 70 words.
9. Question numbers 25 to 33 in section B are Multiple Choice Questions based on Practical skills. You are to select the most appropriate response out of the four provided to you. Each question carries one mark.
10. Question numbers 34 to 36 are explanatory questions based on practical skills and each questions carries 2 marks.

SECTION - A

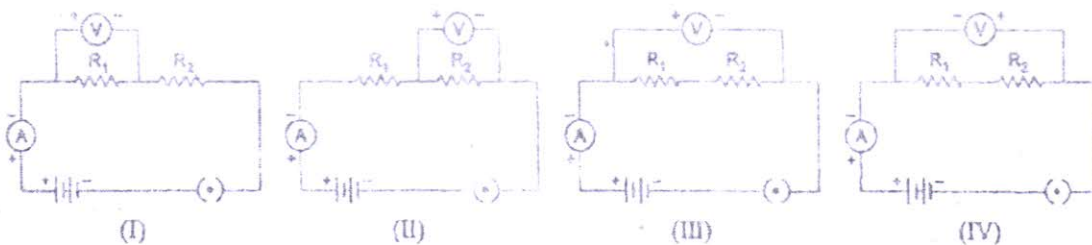
1. Silver Chloride turns grey in sunlight. Why ?
2. Name the instrument used to measure electric current in a circuit and how it is connected in a circuit ?
3. Give two advantages of biogas as an excellent fuel.
4. A solution of potassium iodide is mixed with lead nitrate solution.
 - a) Identify the type of chemical reaction taking place.
 - b) Write a balanced chemical equation for the reaction.
5. How are fats digested in our body ?
6. Why are coils of electric toasters and electric irons made of an alloy rather than pure metals ?
7. What do you mean by rancidity ? Give 2 ways to prevent it.
8. When a boy was followed by a stray dog, he got frightened and started running.
 - a) Name the hormone that prepared him to escape from the stray dog.
 - b) Locate the position of the gland in our body which secretes this hormone.
 - c) Mention 2 effects of this hormone in human body.
9. How would you connect 3 resistors each of resistance $6\ \Omega$ so that the combination has a resistance of (1) $9\ \Omega$ (2) $4\ \Omega$

10. It has been observed that construction of big dams have certain problems associated with them. List any 3 such problems.
11.
 - a) Explain the preparation of a mild base used in soda acid fire extinguisher.
 - b) Write down the equation involved in the preparation.
 - c) What happens when this base is heated ?
12.
 - a) What is a solenoid ?
 - b) Draw the pattern of magnetic field formed around a current carrying solenoid.
13. Translate the following reactions into chemical equation and balance them.
 - a) Ferrous Sulphate on heating decomposes to form ferric oxide, sulphur dioxide and sulphur trioxide.
 - b) Potassium metal reacts with water to give potassium hydroxide and hydrogen gas.
 - c) Hydrogen combines with nitrogen and produces ammonia.
14. How are house hold devices connected in an electric circuit and Why ?
15. A substance 'x' is used by doctors for supporting fractured bones in the right position. It is also used for making surfaces smooth..
 - a) Identify the substance and write its chemical formula.
 - b) It should be stored in moisture proof container. Give reason.
16.
 - a) Define electromagnetic induction
 - b) Name the Scientist who discovered electromagnetic induction.
 - c) Why is alternating current preferred over direct current.
17. Recently when Government decided to set up a nuclear power plant in an area local people raised their voice against it. They demanded that the Government should assure safety measures before setting up such a plant and Government assured them of it.
 - a) Explain the values exhibited by the local people.
 - b) List any 2 concerns of the people for which they were demanding safety measures.
18. In thermite reaction a compound of iron reacts with a metal.
 - a) Name the metal used in the reaction.
 - b) Write a balanced chemical equation involved in thermite reaction.
 - c) Mention 2 uses of this reaction.
19. Dry pellets of a base 'M' when kept in open absorbs moisture and turns sticky. This compound is prepared by chlor-alkali process.
 - a) Write the chemical name and formula of 'M'
 - b) Describe chlor-alkali process with balanced chemical equation.
 - c) Name the reaction when 'M' is treated with dilute HCl and write a balanced chemical equation of the reaction.
20.
 - a) Draw and label the important parts of respiratory system in human beings.
 - b) How are lungs designed in human beings to maximise the area of exchange of gases.
21.
 - a) State Ohm's law and draw a simple circuit to verify Ohm's law using the following components. nichrome wire, an ammeter, a voltmeter, 2 cells of 1.5 v each and a key.
 - b) Write 2 factors on which the resistance of a conductor depends.

22. a) Explain the electrolytic refining of copper with the help of a diagram.
 b) Write down the electrodes and electrolyte used.
 c) Tarnished copper vessels are cleaned with lemon or tamarind juice. Why?
23. a) What is reflex action. Explain it with the help of an example.
 b) Define reflex arc. Draw the diagram showing reflex arc.
24. a) Describe an activity to show that magnet exerts a force on current carrying conductor.
 b) Name and state the rule which gives the direction of force exerted by the magnet on the conductor.

SECTION - B

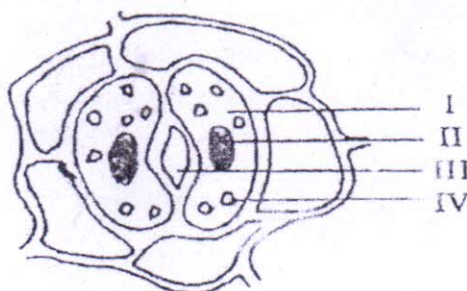
25. A student performing an experiment with series combination of 2 resistors infers that.
- a) Potential difference across the combination is the sum of the potential differences across each of them.
 b) Current passing through each resistor is different then,
- i) A is true and B is false ii) B is true and A is false
 iii) Both A & B are false iv) Both A & B are true
26. Which one of the following decolorises blue solution of copper sulphate.
- a) Fe b) Zn
 c) Al d) All of these
27. The teacher instructed the students to place a healthy potted plant in a darkroom for 2 days prior to an experiment to prove that sunlight is essential for photosynthesis. The purpose of placing it in a dark room is
- a) to increase the intake of CO_2 b) to remove chlorophyll
 c) to destarch the leaves d) to activate the chloroplast
28. Rani added 5 ml of dilute HCl to solid sodium carbonate and she observed that.
- a) no change takes place b) brisk effervescence occurs
 c) yellow precipitate is formed d) the solution turns red.
29. In an experiment to show that CO_2 is produced during respiration, a small test tube suspended inside the conical flask contains.
- a) water b) lime water
 c) salt water d) concentrated KOH solution
30. In an experiment to find the equivalent resistance of 2 resistors in series, the voltmeter is connected correctly in which of the following circuit?



- a) I b) II c) III d) IV

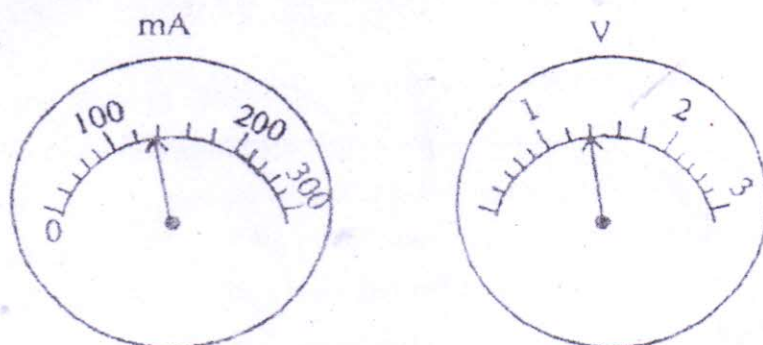
31. Two solutions A and B were found to have pH values 6 and 8 respectively. The inference which can be drawn, is.
- a) A is an acid and B is a base b) B is an acid and A is a base
 c) Both are acid solutions d) Both are basic solutions
32. The stain used in the preparation of temporary mount of leaf peel to show stomata is
- a) glycerine b) methylene blue
 c) iodine solution d) safranine
33. The labeling for the slide of leaf peel showing stomata by 4 students who made the diagram and tabulated the labels as follows.

Student	I	II	III	IV
A	Cytoplasm	Nucleus	Stoma	Chloroplast
B	Guard cell	Stoma	Starch granule	Nucleus
C	Guard cell	Starch granule	Nucleus	Stoma
D	Cytoplasm	Chloroplast	Stoma	Nucleus



The student who made the correct labelling is

- a) Student A b) Student B
 c) Student C d) Student D
34. Write 2 precautions to be taken while performing an experiment to prove that CO_2 is produced during respiration.
35. The current flowing through a resistor connected in an electric circuit and the potential difference across its ends are shown in the diagram. Calculate the resistance in Ohm.



36. Why does zinc react with sulphuric acid to give hydrogen gas but copper does not?