

SAMPLE QUESTION PAPER - 7

Self Assessment_____

Time : 3 Hours

Maximum Marks : 90

General Instructions :

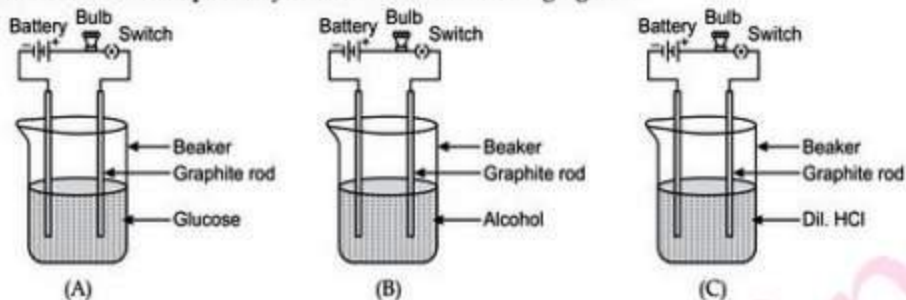
1. The question paper comprises of two sections, A and B. You have to attempt both the sections.
2. All questions are compulsory.
3. All questions of Section A and all questions of Section B are to be attempted separately.
4. Question numbers 1 to 3 in Section A are one mark questions. These are to be answered in one word or one sentence.
5. Question numbers 4 to 6 in Section A are two marks questions, to be answered in about 30 words.
6. Question numbers 7 to 18 in Section A are three marks questions, to be answered in about 50 words.
7. Question numbers 19 to 24 in Section A are five marks questions, to be answered in about 70 words.
8. Question numbers 25 to 36 in Section B are based on practical skills. Question 25 to 33 carry one mark each and Question numbers 34 to 36 carry two marks each.

SECTION 'A'

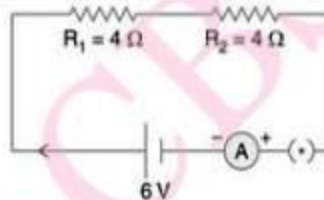
1. Why are the magnetic field lines closed curves ? 1
2. State the relationship between the 1 ampere and 1 coulomb. 1
3. State the type of reaction that occurs inside a nuclear reactor to produce energy. 1
4. Name two solid metals and two solid non-metals along with their symbols. 2
5. Identify the type of reaction from the following equation and define it. 2

$$\text{CH}_4 + 2\text{O}_2 \longrightarrow \text{CO}_2 + 2\text{H}_2\text{O} + \text{heat.}$$
6. AB is a thick copper wire. When electric current 'I' flows through the wire, what is the change observed in the compass needle placed near the wire ? Give reason for this observation. State the change that would be observed if the direction of electric current in the wire is reversed. 2
7. (a) Identify the substances that are oxidized and the substances that are reduced in the following reactions :
 (i) $\text{Fe}_2\text{O}_3 + 2\text{Al} \longrightarrow \text{Al}_2\text{O}_3 + 2\text{Fe}$
 (ii) $2\text{PbO} + \text{C} \longrightarrow 2\text{Pb} + \text{CO}_2$
 (b) What is meant by redox reaction ? 3

8. Illustrate any three chemical properties of acids with examples. 3
9. A student takes three beakers A, B, and C filled with aqueous solution of glucose, alcohol and hydrochloric acid respectively as shown in the following figure :



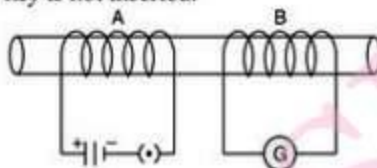
- (i) State your observation in terms of glowing of bulb when the switch is on.
- (ii) Justify your observations by giving reason in each case.
- (iii) Mention the change noticed with appropriate reason if the content of beaker B is replaced by sodium hydroxide solution. 3
10. 2 g of ferrous sulphate crystals are heated in a boiling tube.
- (i) State the colour of ferrous sulphate crystals both before heating and after heating.
- (ii) Name the gases produced during heating.
- (iii) Write the chemical equation for the reaction. 3
11. 3



In the given circuit, calculate :

- (a) the total resistance of the circuit
- (b) the current through the circuit, and
- (c) the potential difference across R_1 and R_2 3
12. (a) "Sodium is a highly reactive metal and it cannot be obtained from its oxide by heating with carbon." Give reason.
- (b) How can sodium be obtained from sodium chloride ? 3
13. Show how would you connect three resistors each of resistance $6\ \Omega$, so that the combination has a resistance of (i) $9\ \Omega$ and (ii) $6\ \Omega$. 3
14. Plants absorb water from the soil. Explain how does the water reach at the tree top ? 3
15. (a) How does the transport of materials in xylem and phloem occurs ?
- (b) What is translocation ? 3
16. (a) Why is hydrogen considered as a better and cleaner fuel than CNG ?
- (b) Mention any two areas where solar cells are used as a source of energy.
- (c) State the biggest hindrance in trapping geothermal energy. 3
17. (i) What is meant by the term hydrated salt ?
- (ii) Give two examples of hydrated salt which are white and state their chemical formula. 3
18. Explain : 3
- (a) Blood goes only once through the heart in Fishes.
- (b) Plants have low energy needs.
- (c) What are capillaries ?

19. (a) Mention the pH range within which our body works. Explain how antacids give relief from acidity. Write the name of one such antacid.
 (b) Fresh milk has a pH of 6. How will the pH change as it turns to curd? Explain your answer.
 (c) A milkman adds very small amount of baking soda to fresh milk. Why does this milk take longer time to set as curd?
 (d) Mention the nature of tooth pastes. How do they prevent tooth decay? 5
20. (a) Define corrosion.
 (b) What is corrosion of iron called?
 (c) How will you recognise the corrosion of silver?
 (d) Why corrosion of iron is a serious problem?
 (e) How can we prevent corrosion? 5
21. 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. 5
22. In the arrangement shown in the figure, there are two coils, A and B, wound on a non-conducting cylindrical rod. Initially, the key is not inserted.



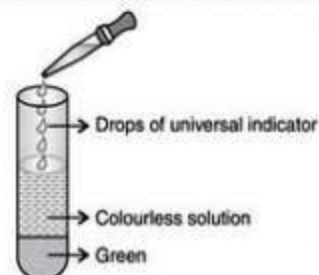
Then the key is inserted and later removed.

- (a) State your observations in each case.
 (b) State the conclusion based on your observations.
 (c) Name the phenomenon and define it.
 (d) Name the two coils. 5
23. (a) State two advantages of transpiration in the plant body.
 (b) List two ways in which 'transpiration' is different from 'translocation' in a tabular form.
 (c) Why do plants have a slow transport system? 5
24. Nervousness can be infrequent, circumstantially bound problems to which problem react differently. Feeling nervous can be normal reaction to stressful, unknown circumstances. Whether you are waiting for the question paper or you are waiting for your turn to give a presentation before your class, you ought to be nervous. While the stimulation that gives rise to nervousness triggers the body changes that occurs because of an increase in stress hormones released by our body.
- (i) Name the stress hormone and the gland by which it is secreted.
 (ii) Mention any three physical changes that occur when you are nervous.
 (iii) As a person, what suggestion will you advise others to reduce nervousness? 5

SECTION 'B'

25. A student is asked to add few drops of universal indicator to a colourless solution as shown in the figure. He observes that the solution has become green. The colourless solution taken is likely to be : 1

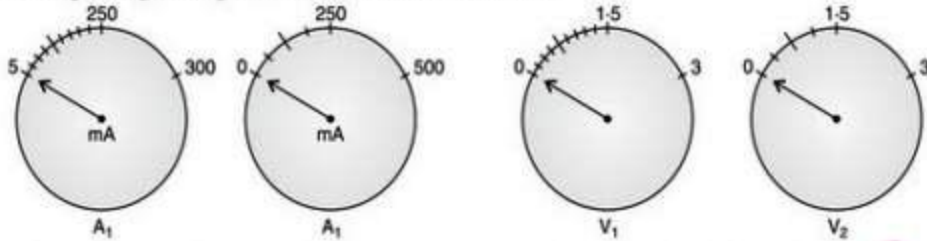
- (A) sodium hydroxide
 (B) dil. Hydrochloric acid
 (C) distilled water
 (D) lemon juice



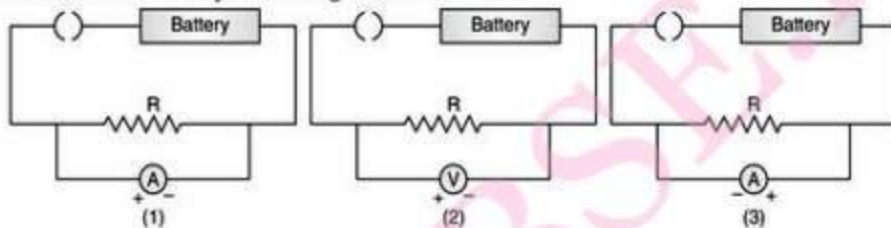
26. $\text{BaCl}_2 + \text{Na}_2\text{SO}_4 \longrightarrow \text{BaSO}_4 + 2\text{NaCl}$ is :
 (A) double displacement reaction
 (C) both (A) and (B)

- (B) precipitation reaction
 (D) decomposition reaction 1

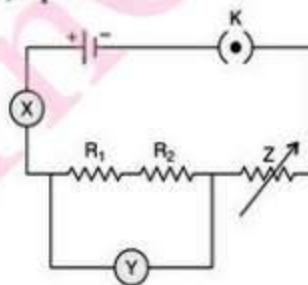
27. The normal positions of the pointers of the two ammeters A_1 and A_2 and two voltmeters V_1 and V_2 are shown in the figure. To study the dependence of potential difference across resistor on the current passing through it, the student should select : 1



- (A) ammeter A_1 and voltmeter V_1 (B) ammeter A_1 and voltmeter V_2
 (C) ammeter A_2 and voltmeter V_1 (D) ammeter A_2 and voltmeter V_2
28. The positive and negative terminal markings are missing from a given battery. The correct terminal can be best identified by the arrangement shown in : 1

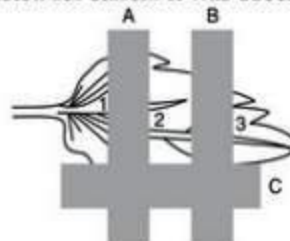


- (A) figure (1) (B) figures (1) and (2)
 (C) figures (2) and (3) (D) figures (1) and (3)
29. The given circuit diagram shows the experimental arrangement of different circuit components for determination of equivalent resistance of two resistors connected in series. The components X, Y and Z shown in the circuit, represent : 1



- (A) rheostat, resistor, ammeter respectively
 (B) ammeter, voltmeter, rheostat respectively
 (C) voltmeter, ammeter, rheostat respectively
 (D) rheostat, ammeter, voltmeter respectively
30. A destarched potted plant was taken and an experimental leaf of this plant was selected. The portions A, B and C of this leaf were covered with black paper strips. This plant was exposed to sunlight for six hours and then the experimental leaf was tested for starch. It was observed that the : 1

- (A) covered portions A, B and C turned blue-black.
 (B) exposed portions 1, 2 and 3 turned blue-black.
 (C) covered portions A, B and C did not change colour.
 (D) exposed portions 1, 2 and 3 did not change colour.

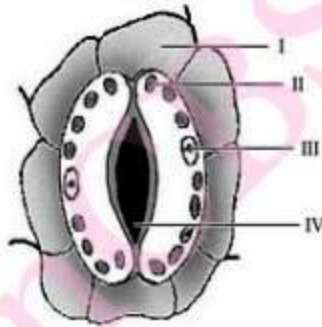


31. The leaves of a potted plant can be destarched by keeping them in : 1
 (A) light for 2-3 days (B) light for 2-3 hours
 (C) darkness of 2-3 days (D) darkness for 2-3 hours
32. The extra stain and glycerine should be removed from the slide by : 1
 (A) tilting the slide (B) heating it over a spirit lamp
 (C) drying it in sunlight (D) using blotting paper
33. As given below a sketch of epidermal peel of a leaf was drawn by a student :

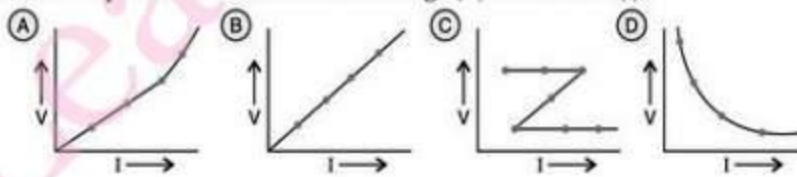


- The part, which is missing in this sketch is : 1
 (A) cell membrane of the cells (B) cell wall of the cells
 (C) nuclei in the guard cells (D) chloroplasts in guard cells

34. In the given figure, label the structure I, II, III, and IV marked in the diagram. 2



35. Roma kept an iron nail in a solution of copper sulphate. The nail turned reddish in colour. This is an example of ----- reaction. How ? 2
36. Which of these represents relation between voltage (V) and current (I) ? 2



NCERT Video and Text solutions Interactive Concept Videos Solved Sample Papers (Text and Video) Discussion Forum Vedic Mathematics

LearnCBSE.in

Never Stop Learning

<https://plus.google.com/+phanicbse>
 facebook.com/ncertsolutionsbooks
<https://in.pinterest.com/LearnCBSE/>
 <https://twitter.com/learnCBSE>