



# CHEMISTRY

## BOOKS - SURA CHEMISTRY (TAMIL ENGLISH)

### HALF YEARLY MODEL QUESTION PAPER

**Mcqs**

1. Atoms of different elements with different atomic numbers, but same mass number are known as \_\_\_\_\_.

A. isobars

B. isotopes

C. isotones

D. isomers

**Answer:**



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2. The basis of modern periodic law is \_\_\_\_\_

A. atomic number

B. atomic mass

C. isotopic mass

D. number of neutrons

**Answer:**



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3. 8% of NaCl solution is \_\_\_\_\_.

A. 8g of NaCl in 100g of water

B. 8g of NaCl in 92g of water

C. 92g of NaCl in 8g of water

D. 92g of NaCl in 100g of water

**Answer:**



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4. Which of the following pairs can be the successive members of a homologous series ?



**Answer:**



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5. The Volume occupied by 4.4 g of  $CO_2$  at S.T.P

A. 22.4 litre

B. 2.24 litre

C. 0.24 litre

D. 0.1 litre

**Answer:**



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6. In the aluminothermic process, the role of Al is \_\_\_\_\_

- A. oxidizing agent
- B. reducing agent
- C. hydrogenating agent
- D. sulphurising agent

**Answer:**



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7. A solution in which no more solute can be dissolved in a definite amount of solvent at a given temperature is called \_\_\_\_\_

- A. Saturated solution
- B. Unsaturated solution
- C. Super saturated solution
- D. Dilute solution

**Answer:**



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8. Rectified spirit is an aqueous solution which contains about \_\_\_\_\_ of ethanol .

A. 95.5 %

B. 75.5 %

C. 55.5 %

D. 45.5 %

**Answer:**



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9. Which of the following has the smallest mass?

A.  $6.023 \times 10^{23}$  atoms of He

B. 1 atom of He

C. 2g of He

D. 1 mole atoms of He

**Answer:**



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## Subjective Questions

1. Lemon juice has a pH 2, what is the concentration of  $H^+$  ions?



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2. How is ethanoic acid prepared from ethanol? Give the chemical equation.



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3. What are the structures involved in the protection of brain?



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4. (i) Calculate the number of molecules in 11g of  $CO_2$ .

(ii) Calculate the number of moles in 81g of aluminium.



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**5. Write notes on**

(i) Saturated solution.

(ii) Unsaturated solution.



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**6. Define rate of reaction.**



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7. Explain the salient features of periods in the modern periodic table.



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8. (i) Arrive at, systematically, the IUPAC name of the compound:  $CH_3 - CH_2 - CH_2 - OH$ .

(ii) In magnesium sulphide, the ratio by mass of Mg and S is 3:4. what is the ratio of the number of Mg and S atoms?



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9. Write the different types of isotopes of oxygen and its percentage abundance .



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10. A solution is prepared by dissolving 45g of sugar in 180g of water. Calculate the mass percentage of solute.



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**11.** When an aqueous solution of potassium chloride is added to an aqueous solution of silver nitrate, a white precipitate is formed.

Give the chemical equation of this reaction.



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**12.** (i) Arrive at, systematically, the IUPAC name of the compound:  $CH_3 - CH_2 - CH_2 - OH$

.

(ii) In magnesium sulphide, the ratio by mass



of Mg and S is 3:4. what is the ratio of the number of Mg and S atoms?



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