

# Sahaj Adhyayan (सहज अध्ययन)

जर हे **Practice Question Papers** तुम्हाला खरंच फायदेशीर वाटत असतील तर तुमच्या सर्व मित्र मैत्रिणींना पाठवा.

त्यांना देखील ह्या सर्वांचा अभ्यासासाठी फायदा होऊ द्या.

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तर ते आम्हाला WhatsApp वर पाठवा,

इतर विद्यार्थी मित्रांना त्या सर्वांचा उपयोग होईल.

ANE

**FIRST TERM EXAMINATION (2021-22)**

STD-XI SCI.

SUB- CHEMISTRY

TIME: 2.30

MARKS- 50

Notes:

1. All questions are compulsory
2. Figures to the right indicate full marks
3. Use of logarithmic table is allowed
4. Draw neat, labelled diagrams and write balanced chemical equations wherever necessary.

**SECTION-A**

**Q.1 Choose the most correct option**

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- i) SI unit of the quantity Electric current is  
a) volt      b) Ampere      c) Candela      d) Newton
- ii) A mixture of acetone and benzene can be separated by the following method  
a) Simple distillation      b) Fractional distillation  
c) Distillation under reduced pressure      d) Sublimation .
- iii) Molar mass is mass of -- \_\_\_\_\_ of a substance .  
a) 1 atom      b) 1 mole      c) 1 molecule      d) 1 element
- iv) Identify the odd one  
a) Rb      b) Ra      c) Sr      d) Be
- v) Which of the following is Lewis acid  
a)  $\text{BaCl}_2$       b) KCl      c)  $\text{BeCl}_2$       d) LiCl
- vi) The energy difference between the shell goes on ——— when moved away from the nucleus.  
a) Increasing      b) Decreasing      c) Equalising      d) Static
- vii) Principle Quantum number describes  
a) shape of orbital      b) Size of orbital      c) Spin of electron  
d) Orientation of the orbital electron cloud.

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**Q.2. Answer in one sentence .**

- i) How many grams that 1 amu contains ?
- ii) What is residue ?
- iii) Which funnel is used in the process of Filtration under suction ?

- iv) Which is the radioactive alkali metal ?
- v) Write electronic configuration of Mg ( $Z=12$ )
- vi) state Heisenberg uncertainty principle.
- vii) Define isotones.

### SECTION-B

Attempt any EIGHT of the followings:

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- Q.3 Find the formula mass of  $\text{CaSO}_4$  (atomic mass of  $\text{Ca}=40.1\text{u}$ ,  $\text{S}=32.1\text{u}$  and  $\text{O}=16.0\text{u}$ ) 2
- Q.4 What is volume ? Write SI unit of volume . 1
- Q.5 Draw a neat labelled diagram of simple distillation .
- Q.6. What are the properties of solvent which is used for crystallization ?
- Q.7. Define a) one mole b) saturated solution
- Q.8. When the process of fractional distillation is employed .
- Q.9. What are alkaline earth metals ? Give their names . 2
- Q.10. What is the action of I)  $\text{O}_2$  II)  $\text{H}_2\text{O}$  on Calcium.
- Q.11. Write postulates of Bohr's Theory of Hydrogen atom.
- Q.12. Draw shapes of  $2s$  &  $2p$  orbitals. 2
- Q.13. Indicate the no. of unpaired electrons in i) Si ( $Z=14$ ) ii) Cr ( $Z=24$ ). 2

### SECTION-C

Attempt any FOUR of the followings:

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- Q.14. State Avogadro Law . Convert degree Celsius temp. to degree Fahrenheit.
  - a)  $40^\circ\text{C}$  b)  $30^\circ\text{C}$  3
- Q.15. What is the volume of  $\text{CO}_2$  gas occupying by
  - 1) 5 moles 2) 0.5 moles of  $\text{CO}_2$  gas measured at STP ?
- Q.16. Which type of liquids are purified by distillation under reduced pressure ? Why is a Condenser used in distillation process ?
- Q.17. Give general electronic configuration of alkali metals . Write uses of group 1 elements 3
- Q.18. Explain the commercial method of preparation of Sodium hydroxide. 2
- Q.19. Give the names of quantum numbers. Write the electronic configuration of i) Fe ( $Z=26$ ) ii) Na ( $Z=11$ ). 3

**SECTION-D**

Attempt any TWO of the followings:

Q.20. Explain the activity \_

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To separate the components of a liquid mixture containing Acetone (b.p.  $56^{\circ}\text{C}$ ) and water (b.p.  $100^{\circ}\text{C}$ )

Q.21. Write SI and CGS units of Density \

ii) Calculate the no. of atoms in each of the followings:

(Average at. mass of  $\text{N}=14\text{u}$ ,  $\text{S}=32\text{u}$ )

a) 0.4mole of nitrogen b) 1.6g of sulphur.

Q.22. Write the preparation, properties and any two uses of  $\text{LiAlH}_4$ . \

Q.23. i) Explain Rutherford's scattering experiment.

ii) Find out the no. of protons, electrons & neutrons in the nuclide of  $_{18}^{40}\text{Ar}$  3

Give uses of sodium hydroxide.