



# CHEMISTRY

## BOOKS - VGS PUBLICATION-BRILLIANT

### MODEL PAPER 4

#### Section A

1. Name two adverse effects caused by acid rains.



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2. Define the terms 'Receptor' and 'Sink'.



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3. What is surface tension ? Write its units.



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4. 4 gram NaOH dissolved in 250 ml of the solution. Calculate Molarity.



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5. Write the conjugate acid and conjugate base of each of the following :



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6. Give an account of the biological importance of  $Na^+$  and  $K^+$  ions.



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7. What is Plaster of Paris? Write its uses.



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8. Poisonous gas



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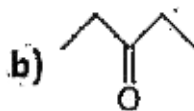
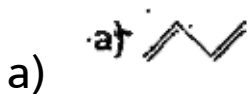
9. How is water gas prepared ?





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10. Write IUPAC names of the following compounds.



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Section B

1. Explain different types of hydrogen bonds with examples.



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2. What is Hybridization ? Explain the structure of  $CH_4$  on the basis of Hybridization.



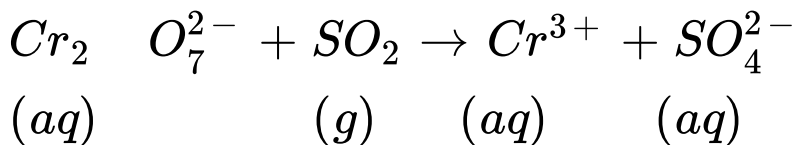
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3.  $360\text{cm}^3$  of  $\text{CH}_4$  gas diffused through a porous membrane in 15 minutes. Under similar conditions,  $120\text{cm}^3$  of another gas diffused in 10 minutes. Find the molar mass of the gas.



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4. Balance the following Redox reaction by ion-electron method in acidic medium.



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5. State and explain the Hess's law of constant heat summation.



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6. Discuss the application of LE Chatellier's principle for the industrial synthesis of Ammonia and sulphur trioxide.



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7. Explain the terms hard water and soft water.

Write a note on the

(ii) Calgon method for the removal of hardness of water.



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8. Explain Borax bead test with suitable example.



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## Section C

1. What are the postulates of Bohr's model of hydrogen atom ? Discuss the importance of this model to explain various series of line spectra in hydrogen atom.



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2. What is a periodic property? How the following properties vary in a group and in a

period? Explain

(b) EN.



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**3.** Describe two methods of preparation of Benzene. Explain Halogenation and Alkylation reactions of Benzene.



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