



CHEMISTRY

BOOKS - VGS PUBLICATION-BRILLIANT

MODEL PAPER 5

Section A

1. Expand B.O.D.



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2. Explain in detail the strategies adopted in Green Chemistry to avoid environmental pollution.



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3. What happens when (i) magnesium is burnt in air (ii) quick lime is heated with silica (iii) chlorine reacts with slaked lime (iv) calcium nitrate is heated ?



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



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5. Which of the gases diffuses faster among N_2 , O_2 and CH_4 ? Why?



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6. How many number of moles of glucose are present in 540 gms of glucose ?



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7. What are intensive and extensive properties?



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8. a) State the third law of thermodynamics. B)

Define entropy.



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9. Define pH. Calculate the pH of 0.001 M of HCl



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10. Write structural formulas of the following compounds :

(i) 3, 4, 4, 5-Tetramethylheptane

(ii) 2,5-Dimethylhexane



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Section B

1. Deduce (a) Boyle's law and (b) Charles law from Kinetic gas equation.



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2. A carbon compound on analysis gave the following percentage composition, carbon 14.5%, hydrogen 1.8%, chlorine 64.46%, oxygen 19.24%. Calculate the empirical formula of the compound.



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3. Write the nature of the following salt solutions.





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4. Write two oxidizing and two reducing properties of H_2O_2 .



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5. Explain any two methods of preparation of diborane. Write the reactions of B_2H_6 with a) H_2O b) CO . Give equations.



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6. Explain the hybridization involved in PCl_5 molecule.



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7. BeF_2 has zero dipole moment where as H_2O has a dipole moment because



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8. Explain the differences in properties of diamond and graphite on the basis of their structures.



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Section C

1. What are quantum numbers? Explain the significance of various types of quantum numbers.



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

(a) Atomic radius.



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3. Describe two methods of preparation of ethane. Given any three reaction of ethane.



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