



CHEMISTRY

BOOKS - FULL MARKS CHEMISTRY

(TAMIL ENGLISH)

EXAMINATION QUESTION PAPER -

MARCH 2019

Part II

1. State and explain Pauli's Exclusion Principle



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2. Define - Valency.



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3. What are ideal gases?



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4. State the third law of Thermodynamics.



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5. What is called Bond Length? Name the techniques through which the length of a bond can be determined



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6. Describe the reaction involved in the detection of Nitrogen in an organic compound by Lassaigne Method





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7. How is Alkane prepared from Grignard reagent?



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8. Define - Acid rain.



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9. Which is the suitable method for detection of Nitrogen present in food and fertilizers?



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Part iii

1. Calculate the equivalent mass of H_2SO_4



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2. Explain diagonal relationship

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3. How is Tritium prepared?

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4. Define - Le-Chatelier principle .

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5. State the term "Isotonic solution"

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6. Both C_2H_2 and CO_3 have the same structure . Explain why.

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7. Write note on Williamson's Synthesis

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8. Explain why $Ca(OH)_2$ is used in white washing .



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9. Give the structural formula for the following compounds.

(a) m - dinitrobenzene

(b) p - dichlorobenzene

(c) 1, 3, 5, Iri-methyl Benzene





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Part Iv

1. Calculate oxidation number of oxygen in H_2O_2

(ii) Write the de-Broglle equation .



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2. State and explain Doberiner's Triad

(ii) Complete the following equation



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3. (1) Among the alkaline earth metals BeO is insoluble in water but other oxides are soluble. Why?

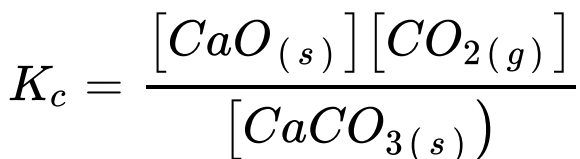
(ii) State Diffusion Law.

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4. Calculate the entropy change during the melting of one mole of ice into water at

$0^{\circ}C$ Enthalpy of fusion of ice is 6008 J mol^{-1}

(ii) Write the balanced chemical equation for



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5. (i) NH_3 and HCl do not obey Henry's law

why?

Write the structure of the following compounds (A) NH_3 (B) BF_3



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6. (i) Identify the cis and trans isomers for the following compounds

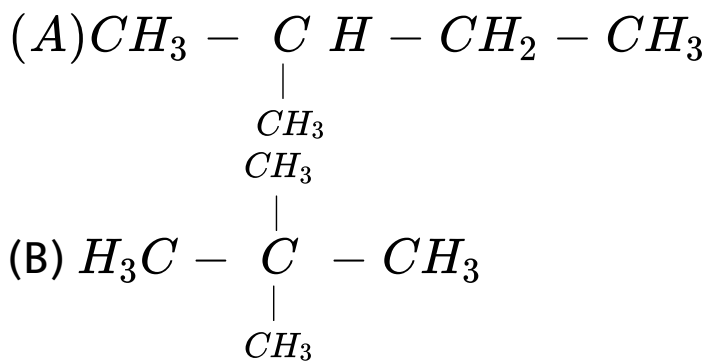


(ii) Explain with example the Positive Mesomeric Effect.



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7. Write the IUPAC name for the following compound.



(ii) What are Nucleophiles and Electrophiles ?

Give one example each.



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8. How will you get the following products with the given reactants ?

(A) Acetylene \rightarrow Benzene

(B) Phenol \rightarrow Benzene

(c) Benzene \rightarrow Toluene

(ii) Write any two different components you get during fractional distillation of Coal Tar at any two different temperatures .



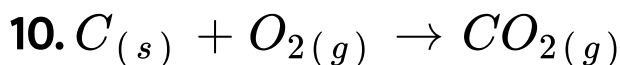
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9. A compound having the empirical formula C_6H_6O has the vapour density 47. find its Molecular formula

(ii) The Simple Aromatic Hydrocarbon compound (A) reacts with Bromine



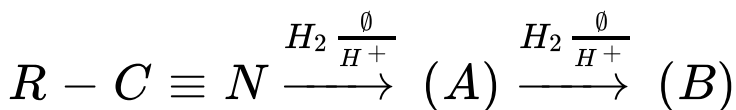
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Calculate the standard entropy change for the above reaction. Given the standard entropies

of $CO_{2(g)}$, $C_{(s)}$, $O_{2(g)}$ are 213.6, 5.740 and 205 JK^{-1} respectively

(ii) Identify the compound (A) and (B) .



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