



CHEMISTRY

BOOKS - UNITED BOOK HOUSE

MODEL QUESTION PAPER 14

Exercise

1. Which one is correct for planck theory

A. $E = \frac{h\gamma}{C}$

$$\text{B. } E = \frac{hc}{\lambda} = \frac{h\nu}{c}$$

$$\text{C. } E = \frac{hc}{\lambda}$$

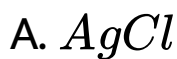
$$\text{D. } E = \frac{h\nu}{c}$$

Answer:



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2. Which one is least Ionic



C. KCl

D. $CaCl_2$

Answer:



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3. Which one is not hydrolysed

A. $SbCl_3$

B. PF_3

C. $AsCl_3$

D. NF_3

Answer:



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4. The relationship between r.m.s velocity and density is

A. $C_{rms} \propto \frac{2}{d^2}$

B. $C_{rms} \propto \frac{1}{d}$

C. $C_{rms} \propto \frac{1}{\sqrt{d}}$

$$D. C_{rms} \propto \sqrt{d}$$

Answer:



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5. Which one is correct for isothermal expansion of an ideal gas

A. Enthalpy decreases

B. Enthalpy remains unchanged

C. entropy changes

D. Entropy remain Constant

Answer:



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6. Which one is the correct unit of entropy?

A. $Cal \text{ or } iemol^{-1}$

B. $Cal \text{ or } iedeg^{-1}mol^{-1}$

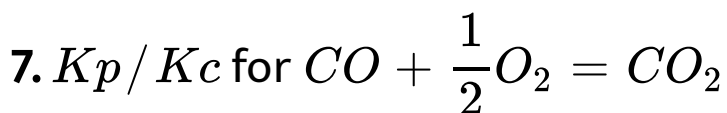
C. $Caldeg^{-1}$

D. 7 mll

Answer:



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A. $1 : \sqrt{RT}$

B. $1 : \sqrt{RT} : 1$

C. $RT : 1$

D. $1 : 1$

Answer:



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8. Asbestos the ore of:

A. Zn

B. Mg

C. Na

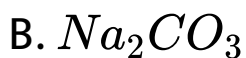
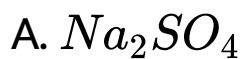
D. Ca

Answer:



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9. Baking salt is:



Answer:



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10. Ocresol and Benzyl Alcohol are isomer of type

A. Metamerism

B. fanchenal

C. Positional

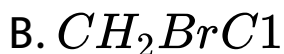
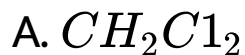
D. Chain.

Answer:



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11. Which one is optically active



Answer:



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12. H_2SO_4 is used for nitration of Benzene for

A. as solvent

B. for generation of nitronium ion

C. for dehydrating agent

D. sulphenating agent.

Answer:



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13. The main product formed when $CH_3CH_2CHBrCH_3$ is treated with alcoholic KOH.

A. Butene

B. 1- butyne

C. 2- butene

D. 1-butinotd.

Answer:



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14. Which one damages ozonosphere

A. Chlorfluro methane

B. CO_2

C. NO_2

D. SO_2

Answer:



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15. State Dulong-Petits rule.



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16. Name the most electronegative element?



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17. What do you mean by extensive property of system?



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18. Write the definition of entropy.



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19. State Huckells-rule for aromaticity.



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20. How much quantity of water will be produced when electric spark is made in a mixture of 20 gm H_2 and 200 gm O_2 ? State the composition of products obtained.



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21. Weight of 0.1 mole of X_2Y is 4.4 gm and 0.05 mole of XY_2 is 2.3 gm. find the atomic weight 'x'.



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22. Give the difference between orbit and orbital.



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23. Dimond is non conductor of electricity but Graphatite is a conductor of electricity explain.



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24. What happen when boran is strongly heated with Concentrated nitric acid. Give balanced Chemical reaction.



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25. What is TEL? State one of its harmful effects.



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26. Show from Hückel rule of aromaticity that cyclopropenyl cation is aromatic.



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27. Explain that Fe^{3+} is more stable than Fe^{2+} . State Aufbau principle. What is the meaning of Aufbau?



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28. How many orbitals are possible for $n = 3$, State the notations used for them? How many fold degenerate they are?



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29. Why is the Electron affinity of Be and Mg endothermic in nature?



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30. State three Characteristics of 'd' block element.



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31. Write the Lewis dot structures for the following compounds: NaCN , N_2O , CO , COCl_2



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32. Which one is more stronger and why between σ and π bond? State the process hybridisation in ethene.



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33. What do you mean by partial pressure of gas? State Dalton's partial pressure of gases refer the conditions



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34. What do you mean by surfactant? Give example. What is the magnitude of surface tension at critical temperature?



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35. Write two differences between reversible and irreversible process? Why enthalpy gets more importance than internal energy in the discussion of thermodynamics.



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36. If the free energy change for a reaction at $25^{\circ}C$ be 5.4 KJ Calculate the equilibrium constant for the reaction. State whether the vaporisation of water at $110^{\circ}C$ in 1 atm

pressure is a spontaneous or non spontaneous process.



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37. Why di1 H_2SO_4 is more convenient than syrapic H_3PO_4 for the preparation of H_2O_2 ?

What is Marc's perhydrol.



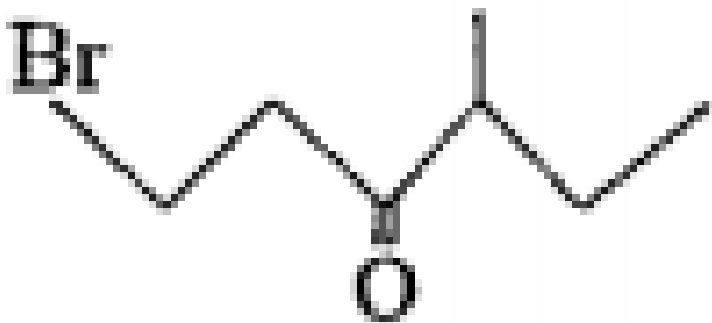
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38. How NH_3 is recovered in solvey process?

State one use of sodium amalgum.

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39. What do you mean by homolytic and heterolytic fission. Give the IUPAC name of



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40. K_p / K_c for $CO + \frac{1}{2}O_2 = CO_2$



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41. What happens when (Give balanced Chemical eqn) Boric Acid is heated with methanol and the Vapour produced is held to the flame of a Bunsen burner.



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42. What happens when (Give balanced Chemical eqn) Boron trifluoride is treated with $LiAlH_4$? What is the formula of silicones.



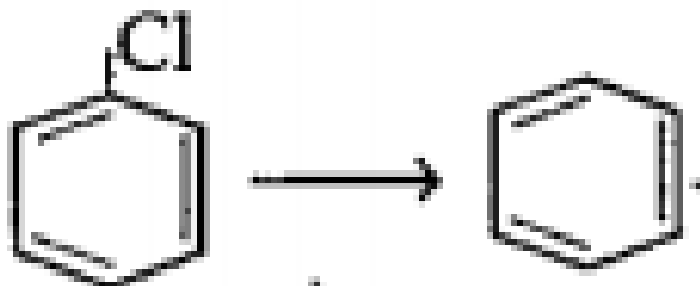
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43. What will happen if CO is treated with NaOH at high temp. Why BF_3 acts as Lewis acid? What is glass?



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44. How would you convert



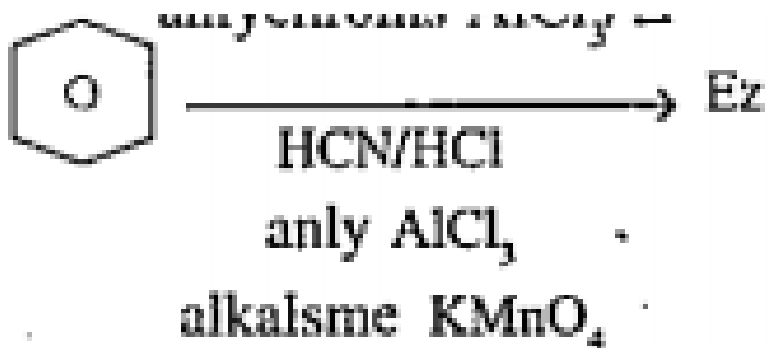
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45. Identify C



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46. Identify E



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