



CHEMISTRY

BOOKS - UNITED BOOK HOUSE

MODEL QUESTION PAPER 5

Exercise

1. Correct expression for angular momentum of an electron—

A. $\sqrt{1(1+1)h} / (2\pi)$

B. $\sqrt{1(1+2)h} / (2\pi)$

C. $\sqrt{1(1+2)h} / (2\pi)$

D. $\frac{\sqrt{1(1+2)h}}{4\pi}$

Answer:



2. Which one forms hydrogen bonding—

A. H_9

B. NH_3

C. SiH_4

D. LiH

Answer:

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3. Which one is polar—

A. $C - F$

B. $N - N$

C. $O - F$

D. $N - CI$

Answer:



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4. Daltons partial pressure law does not applicable for.

A. $He + Ar + H_2$

B. $NH_3 + He$

C. $O_2 + N_2 + Cl_2$

D. $NH_3 + HCl$

Answer:



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5. Which one is correct for the reaction $PCl_5(g) \rightleftharpoons PCl_3(g) + Cl_2(g)$

A. $\Delta H < 0$ & $\Delta S < 0$

B. $\Delta H > 0$ & $\Delta S > 0$

C. $\Delta H = 0$ & $\Delta S < 0$

D. $\Delta H > 0$ & $\Delta S < 0$

Answer:

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6. Which one is an intensive property.

A. heat capacity

B. Electromotive force

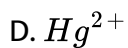
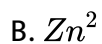
C. Molar conductance

D. Resistance

Answer:

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7. Which one has least solubility sulphides in alkaline medium

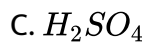


Answer:



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8. Which sulphate has highest solubility



D. $RaSO_4$

Answer:

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9. Which one is hot form w hen KO_2 reacts with water.

A. KOH

B. K_2O_2

C. H_2O_2

D. O_2

Answer:

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10. Which one shows +I effect

A. $-COOH$

B. $-F$

C. $-OH$

D. $-CH_3$

Answer:

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11. Which one has highest acidic nature—

A. FCH_2COOH

B. $BrCH_2COOH$

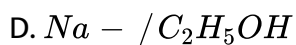
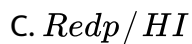
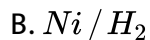
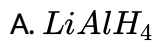
C. $ClCH_2COOH$

D. ICH_2COOH

Answer:

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12. Reagent used for clemmenson reduction



Answer:



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13. CO Sink is—

A. Bacteria of Solil

B. water

C. Air

D. Mamm

Answer:

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14. Which one is heavier 1 gm-molecules O_2 and 1 gm atom sulphur?

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15. Name two elements which does not support Dulong peits law.

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16. Which one has higher ionisation enthalpy N_2 Or O_2 ?

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17. State one non conformity of periodic law.

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18. Write the equation relating enthalpy and free energy.

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19. What is Lindlar's catalyst?

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20. What is the volume of O_2 at NTP that present in 2.4 gm of CO_2

Calculate number of H and oxygen atom present in 0.09 gm of water.

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21. Explain with proper-example pauli exclusion principle.

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22. Write the electronic configuration of the element having atoms C number 17 and find no of uppaired electron in it.

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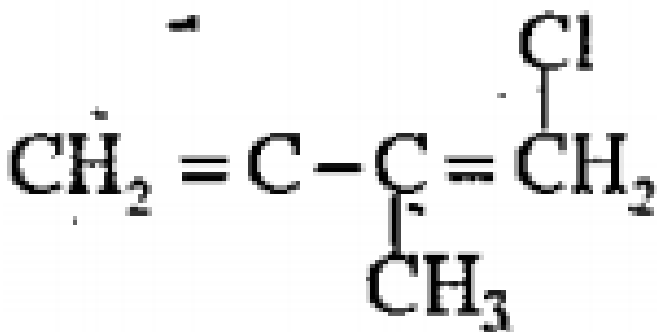
23. How would you prepare:- Boric Acid from Borax.

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24. $AlCl_3$ forms a dimer but BCl_3 cannot-explain.

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25. Write the IUPAC name for the following Compound:-



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26. What is ozone hole? What are the causes of formation of ozone hole?

Distinguish between autecology and synecology.

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27. State the postulates of Bohr's model of hydrogen atom .

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28. State the difference of Rutherford & Bohrmodel

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29. All transitional elements are d-block but the reverse is not true Explain in the example.

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30. Compare the bond angle of the molecules NH_3 and H_2O and CH_4 . Which theory is involved in explain the difference of bondangle?

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31. State the hybridisation and structure of the molecule SF_6 , PCl_5 & $SiCl_4$

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32. Write two differences between Real & Ideal gas. What is partial pressure?

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33. Define surface tension of a liquid. What do you mean by viscosity of a liquid.

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34. The standard heat of formation of $C_6H_5COOH(s)$, $CO_2(g)$ & $H_2O(l)$ at 300K are -408 , -393 , & -286 KJ/mol respectively. Calculate the heat of Combustion of Benzoic acid.

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35. Establish $\Delta G = \Delta H - T\Delta S$.



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36. What do you mean by oxidation number determine the oxidation no of * marked atom. H_2SO_5 , $Na_2S_4O_6$



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37. What is heavy water? Why is it so called?



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38. Calculate the hardness of water in ppm. when 10 gm $MgCl_2$ and 15 gm $Ca(OH)_2$ are dissolved in 1000 gm water.



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39. Why are alkali metals not found in nature?

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40. Give example of elimination and addition reaction in organic Chemistry. Which one *is/are* nucleophile CO_2, Cn^- , NO_2, NH_3

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41. State La-Chatelier principle. What is active mass? How it is measure?
State law of mass action.

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42. Explain what will happen if the reaction below is treated in open & closed Container respectively. $3Fe(S) + 4H_2O(g) \rightleftharpoons Fe_3O_4(S) + 4H_2(g)$

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43. What is pH of a solution? Is the neutral pH at higher temperature be less than 7.0

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44. State reason :Why born nitrides is called inorganic graphite..

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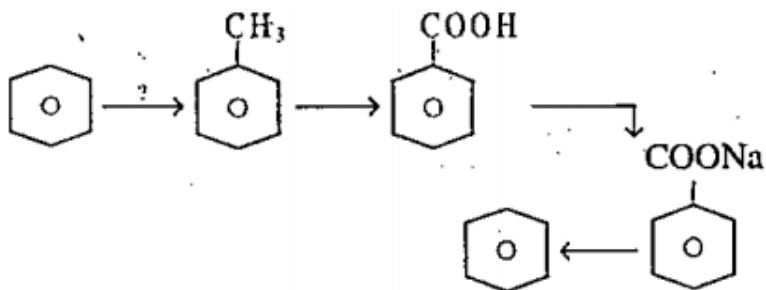
45. What will happen if boron is heated with KOH solution.

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46. What happens when boron is strongly heated with concentrated HNO_3 ? What is the role of Boron for the said reaction? How would you prepared borax from Collemainite.

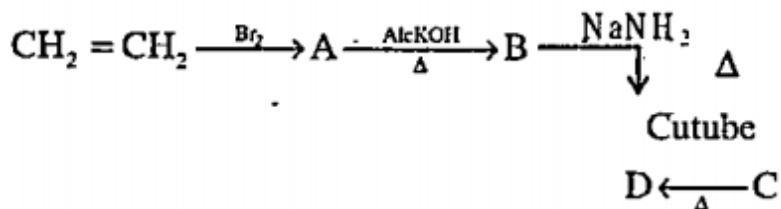
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47. State the reagent used for the following. Conversion:-



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48. State the reagent used for the following. Conversion:-



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49. State the reagent used for the following. Conversion:-



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