



CHEMISTRY

BOOKS - UNITED BOOK HOUSE

SET-3

Exercise

1. Paking efficiency of face centred cubitc lattice
is.

A. 0.52

B. 0.74

C. 0.68

D. 0.26

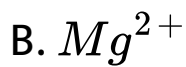
Answer:



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2. Standard reduction potential maximum for:

A. Li^+

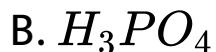
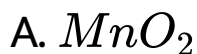


Answer:



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3. Which one acts as shape selective catalyst.



C. Zeolite

D. Cu / ZnO- Cr_2O_3

Answer:



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4. Which one does not form polyhalide:

A. F_2

B. Cl_2

C. Br_2

D. I_2

Answer:



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5. Misch metal contains mostly which block elements?

A. d-block

B. f-block

C. p-block

D. s-block element

Answer:



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6. Which one is an ambidentated ligands.

A. $-CI$

B. $R - NH_2$

C. $-CN$

D. any di-ol

Answer:



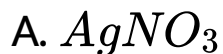
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7.



can be

identified using.



C. $FeCl_3$ soln

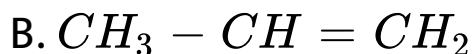
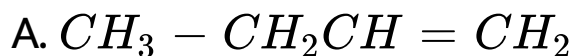
D. $LiAlH_4$

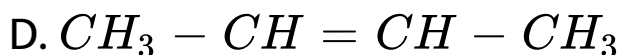
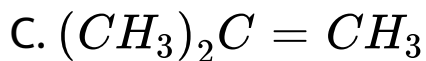
Answer:



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8. Which one form tertiary butyl alcohol on acid hydrolysis:





Answer:



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9. In Arndt Eistert synthesis.

A. higher carboxylic acid

B. higher ester

C. higher aldehyde

D. Higher ketones are formed

Answer:



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10. Nitrobenzene when reduced in neutral medium produces:

A. Azonybenzene

B. Azobenzene

C. hydroxylamine

D. Hydrazobenzen

Answer:



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11. Presence of-OH in the carbon atom helps to differ DNA from RNA.

A. C-2

B. C-4

C. C-1

D. C-3

Answer:



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12. Poly acrylonitrile is known as:

A. Backelite

B. orlon

C. PVC

D. HDPE

Answer:



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13. Nembutal is an:

A. antihistamine

B. Analgesic

C. Hypnotics

D. Narcotic

Answer:

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14. Which one is produced in stomach from aspirine

A. salicylic acid

B. HCl

C. formic acid

D. Benzoic acid

Answer:

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15. Quantity of electricity require to deposited $\frac{1}{2}$ gm equivalent any substance at any electrode is?



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16. Give an example of chemisorption?



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17. In which block transition metals belongs?



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18. Which transition metal forms colourless aqueous solution?



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19. What is antipyretic drug?



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20. Name one antioxidant.



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21. Calculate Vant hoff factor 'i' for dimerization of a salt when 60% molecules dimerizes.



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22. Write with proper example negative deviation of Raoult's law.



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23. Write Freundlich eqn for adsorption & plot $\log x/m$ vs $\log P$.



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24. Explain the hydrolysis of XeF_6 is that a redox reaction?



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25. Why $Bi(NO_3)_3$ solution turns Brownish when KI is added to it? Explain.



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26. Explain why $[Ni(CN)_4]^{2-}$ and $[Ni(CO)_4]$ having same magnetic property through they differ in geometry?



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27. What do you mean by condensation polymerization? Give example?



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28. What do you mean by stoichiometric defects? Give an example of vacancy defects.



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29. Iron form body centred cubic lattice with side length 290.6 pm if its density be 7.89 gm/cc. Find Avogadro number? At wt of Fe 55.85.



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30. What is reverse osmosis? Give one use of it
what is S.I. unit of K_b ?



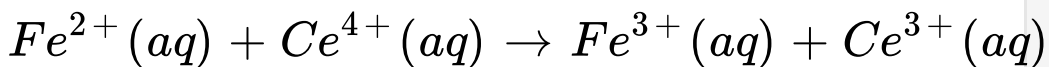
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31. 0.387 gm of a biopolymer when dissolved in 100 ml water at $27^{\circ}C$ shows an osmotic pressure of 4.2 atm find the molecular weight of the biopolymer.



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32. Calculate the equilibrium constant for the redox reaction at $25^{\circ}C$



$$E^{\circ} C \frac{E^{4+}}{C} e^{3+} = 1.42V \quad \text{and}$$

$$E^{\circ} F \frac{e^{3+}}{F} e^{2+} = 0.77V.$$

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33. State Kohlrausch law for equivalent conductance? Define equivalent conductance.

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34. What is zone refining? Name two metal which is purified by this process.

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35. What is Ellingham diagram? State one application of it.



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36. Explain why Cr^{2+} behaves reducing while Mn^{3+} oxidising though both are having d^9 configuration. What is interstitial compound?



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37. Is silver sulphide soluble in aqueous NaCN solution? What is the common oxidation state of actinoid and lanthanoid?



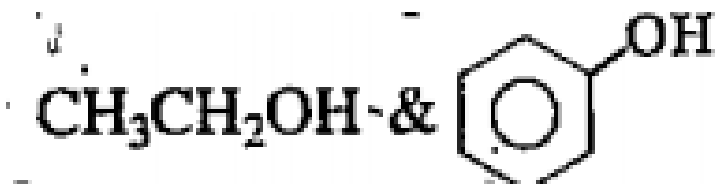
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38. Convert $CH_3CN \rightarrow CH_3NC$ Why diazotization reaction is carried out at low temperature?



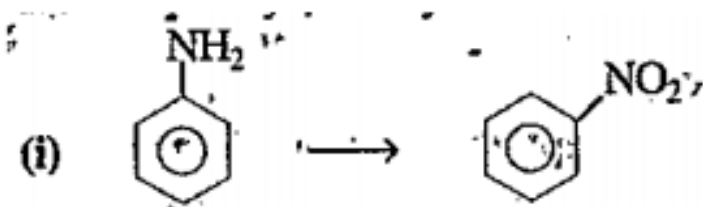
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39. How would you distinguish chemically



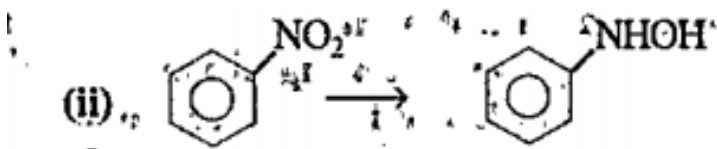
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40. How would you carry out the following conversion in one step:



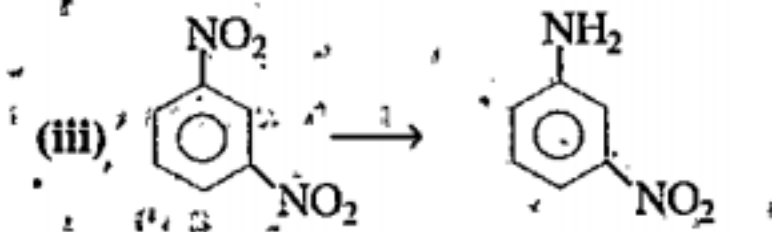
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41. How would you carry out the following conversion in one step:



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42. How would you carry out the following conversion in one step:



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43. What is wax? What do you mean by steroid?

Give example. What is avitaminosis?

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44. Derive the rate equation for 1st order reaction. What is activation energy? Draw an

energy profile diagram for exothermic reaction.



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45. For a first order reaction specific reaction rate is $6.3 \times 10^{-4} \text{ sec}^{-1}$. If the initial concentration be 0.5 mole/lit then find the rate after 30 minute. For a second order reaction with initial concentration of reactant be 0.125 (M) and specific reaction rate $4.2 \times 10^{-3} \text{ mol}^{-1} \text{ lit sec}^{-1}$. Then find half life of the reaction.



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46. What happens when: Slaked lime is heated with Cl_2 at $40^\circ C$ temperature.



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47. What happens when: HCl is added to $K_2Cr_2O_7$ solution. What is the use of Ar in metallurgy?



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48. Explain why: SF_6 forms but not SCl_6 .



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49. Explain why: O_3 is less thermally stable than O_2 . Name a peroxyacid of sulphur.



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50. Give example of Cannizzaro type reaction where acetaldehyde responds.





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51. How would you prepare $\alpha - \beta$ unsaturated ester from acetaldehyde. What is Schiff's reagent.



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