



CHEMISTRY

BOOKS - SHARAM PUBLICATION

SET 13

Exercise

1. Which of the following polymer is prepared from caprolactam?

A. Nylon 6, 6

B. Nylon 6

C. Nylon 6, 10

D. Teflon

Answer:



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2. tert-Butyl methyl ether on heating with HI gives a mixture of

A. tert-Butyl alcohol and methyl iodide

B. tert-Butyl iodine and methyl alcohol

C. isobutylene and methyl iodide

D. isobutylene and methanol

Answer:



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3. Phenol reacts with Zinc dust to give

A. carbolic acid

B. benzene

C. benzo phenone

D. benzaldehyde

Answer:



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4. The specific conductivity of $0.1N\text{KCl}$ solution is $0.0129\text{ohm}^{-1}\text{cm}^{-1}$. The resistance of the solution in the cell is 100ohm . The cell constant of the cell is

A. 1.29×10^{-3}

B. 1.29×10^{-4}

C. 0.0129

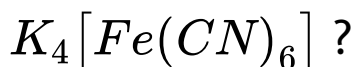
D. 1.29

Answer:



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5. Which of the following is the IUPAC name of



A. Potassium ferricyanide

B. Potassium ferrocyanide

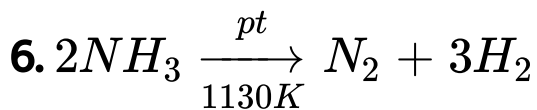
C. Potassium hexacyano ferrate (II)

D. Potassium hexacyano ferrate
(III)

Answer:



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the order of the above reaction is

A. Second order

B. First order

C. Zero order

D. None of these

Answer:



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7. Which of the following ion is coloured in solution ?



Answer:



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8. Which type of solid is silicon carbide?



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9. For the mixture of gases in equilibrium with a liquid, how is the partial pressure of the gas is related to the mole fraction of the gas in the solution.



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10. Write the relation between decrease in free energy and equilibrium constant of a cell reaction.



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11. What is slag ?



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12. Name the halogen having lowest ionization energy.



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13. Which organic compound is formed when an ethereal solution of acetonitrile (CH_3CN) is reduced with $SnCl_2$ in presence of HCl gas at room temperature?



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14. Which type of drug is used to treat allergy?



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15. Define face centred cubic and body centred cubic unit cell.



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16. What is the difference between true solution and colloidal solution?



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17. Calculate boiling point of aqueous solution containing 5.85g NaCl in 200g water (K_b for water = 0.56kgmol^{-1} , α for NaCl= 1)



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18. What happens when ammonium chloride is heated with quick lime?



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19. Why the noble gases , in general , are chemically inert ?



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20. Define chelating ligand. Give an example.



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21. How is 'Tollens' reagent used to distinguish between formic acid and acetic acid?



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22. How can you convert bromobenzene to benzoic acid ?



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23. Name two advantages of synthetic detergents over soap.



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24. What are the monomers of natural rubber and synthetic rubber?



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25. Write notes on : Allotropes of sulphur





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26. Define thermosetting and thermoplastic polymers with example.



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27. What is difference between calcination and roasting ?



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28. Write notes on any two :

Crystal field Theory



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29. Write notes on

Tyndal effect



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30. Match the polymer of column I with correct monomer of column II.

Column - I

- (i) Neoprene
- (ii) Teflon
- (iii) Natural rubber
- (iv) Poly propene
- (v) PVC
- (vi) Buna-N

Column - II

- (a) 1, 3- butadiene
- (b) propene
- (c) Vinyl chloride
- (d) Tetrafluoroethylene
- (e) Chloroprene
- (f) isoprene



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31. A compound (A) having molecular formula $C_3H_7NO_2$ reacts with Sn and Conc.HCl to give compound (B). Compound (B) reacts with solid $NaNO_2$ and dil HCl at 273K to give compound C, which on treatment with $SOCl_2$ gives

compound (D). Write the structure of the compound A, B, C & D.



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32. Discuss the construction and working of a dry cell.



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33. Write a note on electrical property of Collids.



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34. What do you mean by rate of a reaction and instantaneous rate of the reaction?



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35. Write the rate expression for the reaction



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36. What are transition elements? Discuss the characteristic properties of the transition elements with reference to their

Catalytic property



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37. What are transition elements? Discuss the characteristic properties of the transition elements with reference to their

Magnetic property



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38. What are transition elements? Discuss the characteristic properties of the transition elements with reference to their Complex formation.



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39. How can you prepare benzoic acid from toluene? What happens when benzoic acid

reacts with

thionyl chloride



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40. How can you prepare benzoic acid from toluene? What happens when benzoic acid reacts with

Heated with ammonia?



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41. Between benzoic acid and p-nitrobenzoic acid which is stronger ?



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42. Write notes on

Covalent and metallic solids.



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43. What are colligative properties? Show that osmotic pressure is a colligative property.



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44. 200 mg of protein is dissolved in 20ml of a solution. If the osmotic pressure of the solution is 15mm of hg at 298k, calculate the molecular mass of protein.



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45. Write short notes on: Cannizzaro's reaction.



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46. Write a note on Kolbe's reaction.



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47. Write short notes on : Reimer-Tiemann's reaction





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