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 $0.1NkCl$ solution is $0.0129ohm^{-1}cm^{-1}$. 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 $K_4\left[Fe(CN)_6\right]$?

A. Potassium ferricyanide

B. Potassium ferrocyanide

C. Potassium hxacyano ferrate (II)

D. Potassium hexossium hexacyano ferrate (III)

Answer:

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6. $2NH_3 \xrightarrow[1130K]{pt} N_2 + 3H_2$

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 ?

A. V^{3+}

B. Fe^{2+}

C. Co^{2+}

D. Sc^{3+}

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 eqilibrium 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 etherial 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 as 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}, $\propto$ 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	Column - II
(i) Neoprene	(a) 1, 3- butadiene
(ii) Teflon	(b) propene
(iii) Natural rubber	(c) Vinyl chloride
(iv) Poly propene	(d) Tetrafluoroethylene
(v) PVC	(e) Chloroprene
(vi) Buna-N	(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

$2A + 3B \rightarrow 3C$

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

Catalytic property

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

Magnetic property

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38. What are transition elements? Discuss the characteristic properties of the transition elements with refrence to their

Complex formation.

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

reactswith

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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