

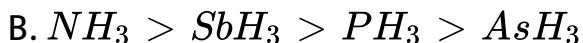
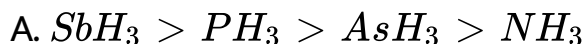
CHEMISTRY

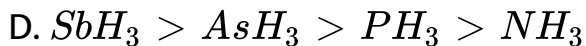
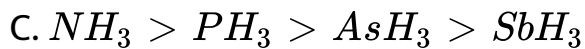
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SET 12

Exercise

1. The basic character of hydrides of the VB group elements decreases in the order:





Answer:



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2. The valency of Cr. In the complex $[Cr(H_2O)_4Cl_1]$ is

A. 3

B. 1

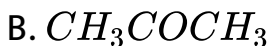
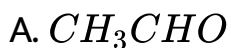
C. 6

D. 5

Answer:

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3. Which one of the following will not react with ammoniacal silver nitrate solution ?



Answer:

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4. The osmotic pressure of 1(M) aqueous solution of NaCl is _____ osmotic pressure of 1(M) aqueous solution of glucose.

A. nearly double

B. less than

C. One half

D. equal to

Answer:



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5. Iodine molecules are held in the crystal lattice by

A. London forces

B. dipole- dipole interaction

C. Covalent bonds

D. Coulombic forces

Answer:



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6. For the $Cu|Ag^+||Cu^{2+}|Ag$ cell, if the emf of the cell is found to be +0.46 volt, the standard free energy change will be

A. $-98.0kj$

B. $-89.0kj$

C. $+89.0kj$

D. $-44.4kj$

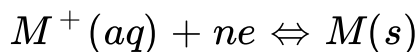
Answer:

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7. In NaCl crystal _____ ions occupy all the octahedral sites.

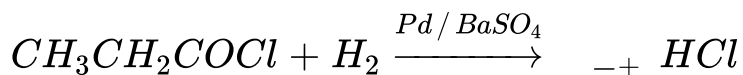
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8. Derive the Nernst equation of electrode potential at 25°
C for the electrode reaction.



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9. Complete the reaction



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10. Write the name of two antiseptics.

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11. Which gas is evolved when ammonium dichromate is heated?

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12. Give an example as Cannizzaro.s reaction.



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13. Write the electronic configuration of cerium.



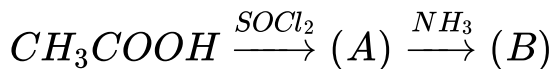
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14. What are different types of ligands. Give an example of each.



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15. Identify A & B in the following reaction.



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16. Write the uses of Xe and Rn.

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17. What do you mean by copolymerization? Give an example.

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18. How will you prepare isopropyl alcohol from acetaldehyde?

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19. Why do the first row transition elements exhibit variable oxidation states?

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20. What is the difference between activation energy and threshold energy?

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21. Describe roasting of ZnS.

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22. What happens when NH_3 gas is passed through silver nitrate solution?

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23. Define Hardy -Schulze rule.

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24. What is Gatterman - Koch reaction? Give equation.

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25. Discuss S_N2 reaction.

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26. What is the action of Cl_2 with ammonia ?

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27. Write short notes on : Werner's theory of co-ordination compounds.

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28. Write three differences between physical and chemical adsorption.

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29. Write a note on interstitial compounds.

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30. Discuss nitration and bromination of benzoic acid.

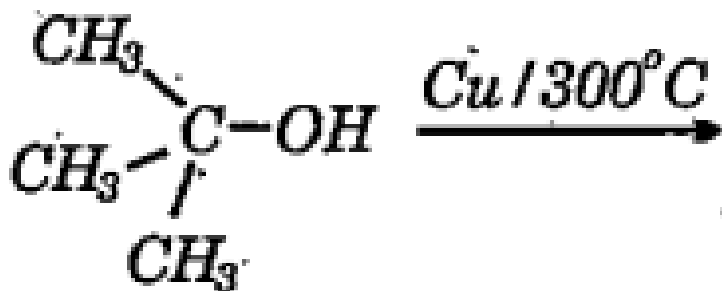
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31. Write the organic compounds formed in the following reaction



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32. Write the organic compounds formed in the following reaction



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33. Write the organic compounds formed in the following reaction



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

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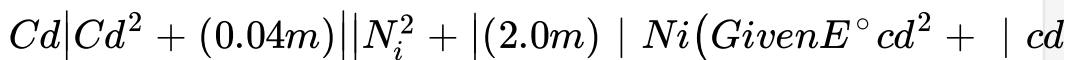
35. Write a note on cataphoresis.

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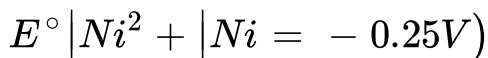
36. Define specific conductance , equivalent conductance. What are their units? What is the effect of dilution on them?

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37. Calculate the EMF of the following cell.



= -0.4 V and



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38. Give a method of preparation of Sulphur dioxide? What happens when this gas is passes through acidified $KMnO_4$ solution and acidified ferric sulphate solution?

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39. Why does SO_2 act as a bleaching agent and is temporary ?

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40. How is acetaldehyde prepared from acetic acid? How does it react with dil NaOH

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41. How is acetaldehyde prepared from acetic acid? How does it react with



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42. How is acetaldehyde prepared from acetic acid? How does it react with



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43. How can you prepare phenol from nitrobenzene? What happens when phenol is treated with $CHCl_3$ and $NaOH$

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44. How can you prepare phenol from nitrobenzene? What happens when phenol is treated with CH_3Cl and $anhAlCl_3$?

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45. Why O-nitrophenol is less acidic than p-nitrophenol?

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46. Prove that depression in freezing point is a colligative property.

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47. How will you calculate the molecular mass of a non-volatile solute from depression of freezing points?

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48. Latent heat of fusion of ice is $1436.3 \text{ cal mol}^{-1}$. Calculate the molal depression constant of water.

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