



CHEMISTRY

BOOKS - UNITED BOOK HOUSE

SET-16

Exercise

1. For an ionic crystal r^+/r^- 0.414- 0.732 the coordination number be.

A. 6

B. 8

C. 1

D. 4

Answer:



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2. For a cell to be spontaneous the correct condition.

A. $\Delta G = 0, \Delta H = 0$

B. $\Delta G < 0, \Delta H \geq 0$

C. $\Delta G > 0, \Delta H = 0$

D. $\Delta G < 0$

Answer:



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3. Which one is a nano material

- A. One dimension of the material shall be 1 μm or less
- B. All dimensions of the material shall be compoulsorily within range 1nm-10nm
- C. One dimension of the source material shall be 1nm- 100 nm
- D. All dimensions of source material shall be 1 nm or less

Answer:



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4. No. of bonds in cyclic metaphosphoric acid is

A. 0

B. 2

C. 3

D. 4

Answer:



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5. In alkaline medium I^- when gets oxidised by MnO_4^- the product that yields.



Answer:



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6. Oxidation state of Cr in $[Cr(NH_3)_4Cl_2]^+$

A. +3

B. +2

C. +1

D. 0

Answer:



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7. A pair of compounds having mirror image relationship:

- A. Enantiomer
- B. Diastereoisomer
- C. Homomerr
- D. None of these

Answer:



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8. A polyhydric alcohol having molecular weight 180 on acetylation gives an acetyl derivatives having molecular weight 390. No of-OH group in it.

A. 3

B. 4

C. 5

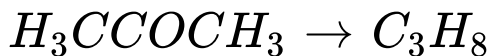
D. 6

Answer:



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9. The reagent required for the change



A. Zn-Hg, Conc HCl

B. $LiAlH_4$

C. $H_2 - Ni$

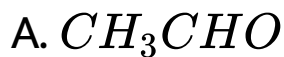
D. $NaBH_4$

Answer:



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10. When Iodoform is strongly heated in the KOH is



Answer:



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11. Which base is absent in DNA

A. Adenin

B. Guanine

C. Cytosin

D. Urasil

Answer:



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12. Which reaction chemcially differs ethylamine from aniline

A. Carbyl amine reaction

B. Hinsberg reaction

C. Nitrous acid test

D. Azodye test

Answer:



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13. Tincture Iodine is.

A. Aqueous solution is I_2

B. Aqueous $KI + I_2$ solution

C. Alcoholic solution of I_2

D. Aqueous solution of KI

Answer:



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14. Complete hydrolysis of cellulose yields

A. D-Fructose

B. D-Ribose

C. D-Glucose

D. L-Glucose

Answer:



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15. What should be change of electrode potential if the Zn^{2+} dilution is increased 100 times of the cell Zn^{2+} / Zn ?



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16. What will happen when $FeCl_3$ is added to freshly precipitated $Fe(OH)_3$ solution.



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17. What is the difference between sol and gel?



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18. Why Cu is considered to be a transitional element though it has completed d-subshell.



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19. Which one can be easily promoted to +3 state among Mn^{2+} and Fe^{2+} ?



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20. What is an antibiotic?



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21. Chloroform-Acetone soln shows negative deviation to an ideal solution. In such case, what is the role of intermolecular force in the determination of vapour pressure.



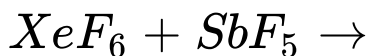
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22. What is peptization?



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23. Complete the reaction and balance it-



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24. Complete the reaction and balance it-



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25. Arrange the compounds as per their increasing order of the said property. NH_3 , PH_3 , AsH_3 , SbH_3 . (basicity).



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26. Arrange the compounds as per their increasing order of the said property. H_2O , H_2S , H_2Se , H_2Te . (boiling point)



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27. State which one is high spin and which one is low spin complexes. State hybridisation of Fe atom in both the compound.



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28. Differentiate Chemically



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29. What is bakelite?



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30. An element forms a body centred cubic lattice of edge length 288 pm density of the element 7.2 gm cm^{-3} . Calculate the number of atoms and unit cell in 208gm of that element.



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31. Copper form face centred cubic lattice with side length 362 pm. Calculate its density (Cu=63.55).



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32. Osmotic pressure of blood is 7.40 atm at $27^{\circ}C$. Number of mol of glucose to be used per L for an intravenous injection that is to have the same osmotic pressure as blood is



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33. Write the monomers of Dacron.



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34. How will you convert: benzaldehyde to cinnamic acid



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35. How would you carry out the following conversion? Aniline \rightarrow 1, 4-Dinitro Benzene.

Aniline \rightarrow Iodobenzen.



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36. Explain why 1-butyne produces white precipitate with ammoniacal $AgNO_3$ solution but 2 butyne does not respond to this reaction.



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37. What happens when phenol is heated with caustic soda and chloro-form. Which process you will prefer for synthesis of $CH_3OC_2H_5$: CH_3OH and C_2H_5OH in 1:1 molar ratio is treated with conc H_2SO_4 .



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38. What happens when phenol is heated with caustic soda and chloro-form. Which process

you will prefer for synthesis of $CH_3OC_2H_5$:

CH_3I and CH_3CH_2ONa is allowed to react.



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39. What will happen when $C_6H_5N_2^{\oplus}Cl^{\ominus}$ as added to alkaline phenol solution?



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40. What is the role of sodium xanthates in froth flotation process? State the basic

principle of the process zone refining.



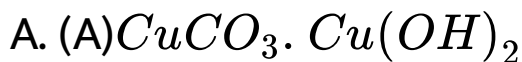
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41. Why blast furnace is not used in the extraction of zinc? Why Iron can't be extracted from iron pyrites?



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42. Which of the following compounds is called malachite?



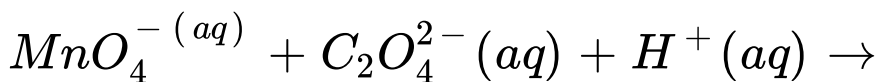
Answer:



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43. $TiCl_3$ coloured but $TiCl_4$ colourless-

Explain. Complete the following reaction-





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44. Draw the structure of D-Glucose. Which vitamin deficit causes pernicious anaemia?



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45. Which of the following element(s) is/are present in bronze?

A. (A) Cu

B. (B) Sn

C. (C) Zn

D. (D) Ni

Answer:



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46. Explain the following.

Interhalogen compounds are more reactive than halogens.



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47. Draw the structure of $H_4P_2O_7$ and $H_2S_2O_7$.



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48. Which happens when. Ozone reacts with KI in presence of H_2SO_4 . Sodium Chloride is treated with MnO_2 in presence of H_2SO_4



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49. Arrange as per increasing acidic nature:

HOCl , HClO_3 , HClO_4 , HClO_2



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50. What happens when white phosphorus reacts with boiling sodium hydroxide solution?



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