



CHEMISTRY

BOOKS - MODERN PUBLICATION

SAMPLE PAPER 2015

Excercise

1. Amino acids are :

A. Acidic

B. Alkaline

C. Amphoteric

D. Neutral

Answer: C



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2. Which one of the following compound is a vitamin ?

A. Sucrose

B. Ascorbic acid

C. Savlon

D. Alanine

Answer: B



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3. Reaction between primary amine, $CHCl_3$ and alc. KOH is called

A. Aldol condensation

B. Friedel-Craft reaction

C. Cannizzaro's reaction

D. Carbylamine reaction

Answer: D



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4. Treatment of phenol with Br_2 / H_2O yields

A. o-bromo phenol

B. p-bromo phenol

C. 2,4,6- tribromo phenol

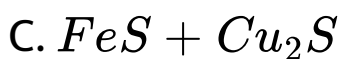
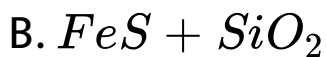
D. m-bromo phenol

Answer: C



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5. The composition of 'Copper Matte' is :





Answer: C



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6. Acid hydrolysis of ethyl acetate is

- A. Zero order
- B. First order
- C. Second order
- D. Third order

Answer: B



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7. Methyl - Ketone is identified by the reagent :

A. Tollen's reagent

B. $\frac{I_2}{K}OH$

C. Fehling's solution

D. Schoiff's reagent

Answer: B



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8. pH of 0.001(*M*) *NaOH* solution is

A. 3

B. 7

C. 11

D. 14

Answer:



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9. Which one of the following will not react with ammonical silver nitrate solution ?

A. Acetylene

B. Acetone

C. Acetaldehyde

D. Formic acid

Answer: B



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10. Which one of the following is a natural polymer?

A. Protein

B. Teflon

C. Nylon

D. Terylene

Answer: A



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11. Write the IUPAC name of $K_2 [CrCO(CN)_5]$



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12. Write the structural formula of acetone sodium bisulphite.



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13. Name the linkage present in protein .



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14. The conjugate acid of NH_2 is



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15. Name the catalyst used in the contact process of manufacture of H_2SO_4



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16. For a spontaneous reaction Gibb's free energy change is always.....



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17. Fill in the blanks : An electron donating substituent in benzene fixes the incoming electrophile to Position.



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18. Oxidation of ethyl benzene with alkaline $KMnO_4$ gives



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19. Mercurochrome is used as an—.



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20. Sodium or potassium salts of higher fatty acids are called



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21. Write the chemical test to distinguish between formic acid and acetic acid.



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22. How is acetone converted to mesityl oxide ?



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23. Why do transitional elements form complex compounds ?



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24. What happens when SO_2 is passed through sulphuretted hydrogen dissolved in water? Give equation.



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25. Why hydrogen bromide cannot be prepared by reacting sodium bromide with concentrated H_2SO_4 ?



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26. What is the difference between order and molecularity of a reaction ?



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27. C-11 is a radioisotope of carbon. Its half life is 20 minutes. What fraction of the initial number of C-11 atoms in a sample will have decayed away after 80 minutes ?



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28. Calculate the molar solubility 'S' of Barium phosphate in terms of its solubility product K_{sp} .



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29. What type of hybridisation takes place in xenon during the formation of XeF_4 ? What is its shape?



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30. What is Sandmeyer's reaction?



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31. What are the different types of carbohydrates? Give one example of each.



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32. What are the interhalogen compounds? Give examples.



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33. What is coupling reaction ? Give an example.



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34. For a $0.01(N)$ solution of sodium acetate, calculate
hydrolysis constant



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35. Write the structure formulae of all the isomeric amines with molecular formula C_3H_9N and classify them. Why dimethyl amine is more basic than methyl amine?



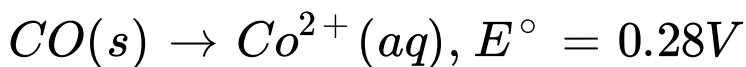
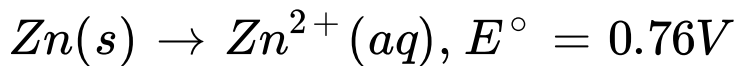
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36. Describe the construction and working of Daniell cell.

The following reaction occurs in a cell



Write the electrode reaction and find out the emf of the cell. Given



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37. State Le-Chatelier's principle. Explain the principle with reference to its application to the synthesis of ammonia by Haber's process.



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



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39. The co ordination complex

$[Cu(OH_2)_6]^{2+}$ has one unpaired electron .

According to valence bond theory which of the following statements are true ?

(i) The complex is octahedral , (ii) The complex is an outer orbital complex , (iii) The complex is d^2sp^3 hybridised, (iv) The complex is

dismagnetic , (v) The co- ordination number is

6



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40. Which type of ligand is EDTA.



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41. How is fluorine prepared by Dennis method?



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42. How is mono- carboxylic acid prepared from ester ? How does it react with sodium bicarbonate ?



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43. Arrange the following acids in their increasing order of acidity with reasons.

HCOOH



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44. How is phenol obtained from benzene ?

Explain the acidic character of phenol



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45. What is Riemer-Tiemann reaction? Give equation.



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