



CHEMISTRY

BOOKS - MODERN PUBLICATION

TEST PAPER 10

Exercise

1. Phenol is heated with CCl_4 and alkaline KOH to form salicylic acid. The reaction is known as :

- A. Friedel Craft reaction
- B. ROsenrhund reaction
- C. Reimer-Tiemann reaction
- D. Perkin's reaction

Answer: C



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2. The vapour pressure of benzene at $90^{\circ}C$ is 1020 torr. A solution of 5 g of a solute in 58.5 g

benzene has vapour pressure 990 torr. The molecular weight of the solute is:

A. 78

B. 178

C. 205

D. 220

Answer: D



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3. The atomic weight of Al is 27. When a current of 5 Faraday is passed through a solution of Al^{3+} ions, the wt. of Al deposited is :

A. 9 g

B. 27 g

C. 36 g

D. 45g

Answer: D



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4. Which element occurs in free state :

A. *Fe*

B. *Co*

C. *Pt*

D. *Ni*

Answer: C



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5. The number of geometrical isomers of, $[Co(NH_3)_3(NO_2)_3]$ are:

A. 2

B. 4

C. 3

D. 0

Answer: A



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6. Acetanilide is obtained by the reaction of acetyl chloride with:

A. acetamide

B. aniline

C. acetaldehyde

D. phenol

Answer: B



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7. The product formed by the reaction of an aldehyde with a primary amine is :

A. Aromatic acid

B. Schiff base

C. Ketone

D. Carboxylic acid

Answer: B



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8. Between $[CoF_6]^{3-}$ and $[Co(NH_3)_6]^{3+}$ which one is a high spin complex ?



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9. What is the monomer of neoprene ?



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10. Name the main female sex hormone



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11. Name the monomer of nylon-6.



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12. $K_3 [Co(NO_2)_6]$ is :



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13. The magnetism arises due to alignment of magnetic moments of domains in the same

direction is



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14. Calcium salt of all acids except formic acid as dry distillation gives_____



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15. Define chelating ligand. Give an example.



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16. What causes Brownian movement in colloidal solution ?



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17. Explain ferromagnetism, anti-ferromagnetism and ferrimagnetism ?



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18. When a current of strength 3 amperes is passed through silver nitrate solution for 20 minutes 4 gms of silver metal is deposited.

What is the ECE of silver ?



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19. What the effect of temperature on rate constant ?



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20. What method is used for refining Zr and Ti ? Explain with equation.



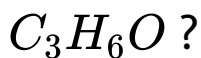
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21. What are the drawbacks of Werner's coordination theory?



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22. What are functional isomers exhibited by



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23. Give a chemical test to distinguish between ethyl alcohol and methyl alcohol.



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24. If water contains dissolved calcium hydrogen carbonate (or Ca^{2+} ions) out of soaps and synthetic detergents, which one will you use for cleansing clothes ?



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25. $[Fe(NH_3)_6]^{2+}$ and $[Fe(H_2O)_6]^{2+}$ are of different colours in dilute solution. Why ?



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26. What is difference between physisorption and chemisorption ?



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27. What is Cannizzaro's reaction? Give equation.



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28. What are hormones ?





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29. Give important differences between lanthanides and actinides.



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30. Explain, why phenol is acidic, while ethyl alcohol is neutral.



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31. Which is more acidic between formic acid and acetic acid ? Explain.



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32. How does acetaldehyde react with Phenyl hydrazine ?



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33. Write the principle of preparation of Neoprene.



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34. Explain the terms "Target molecules or drug targets" as used in medicinal chemistry.



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35. Write notes on :

A. Hinsberg's test for amines

B. Reimer-Tiemann reaction

C. Diazo coupling reaction

D.

Answer:



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36. How can acetaldehyde be prepared from acetyl chloride and acetylene?

A. Acetyl chloride

B. Acetylene

C.

D.

Answer:



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37. How does formic acid react with Fehling solution and Tollen's reagent?



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38. Give the principle of extraction of copper from one of its ore.



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39. Why does copper not liberate H_2 gas from dilute mineral acid ?



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40. Describe the preparation of Ozone.



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41. Discuss the important properties and uses of ozone.



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42. What do you mean by depression in freezing point of a solution ? How will you calculate the molecular mass of solute from depression in freezing point ? A solution

containing 34.2 g cane sugar ($C_{12}H_{22}O_{11}$) dissolved in 500 g of water froze at $-0.374^{\circ}C$. Calculate the freezing point depression constant of water.



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



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44. Addition of 0.643 g of a compound to 50. mL of benzene (density $0.879 \frac{g}{mL}$) lowers the freezing point from $5.51^{\circ}C$ to $5.03^{\circ}C$. If K_f for benzene is $5.12 Kkgmol^{-1}$, calculate the molar mass of the compound.



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