CHEMISTRY

BOOKS - ACCURATE PUBLICATION

BOARD PAPER MARCH - 2019

Questions

1. What are analgesics ?

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2. Find Molarity if 0.0580 moles of a compound dissolve is 200 ml of its solution.

3. What are reducing sugars ?

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4. Give one example of artificial sweetening agent.

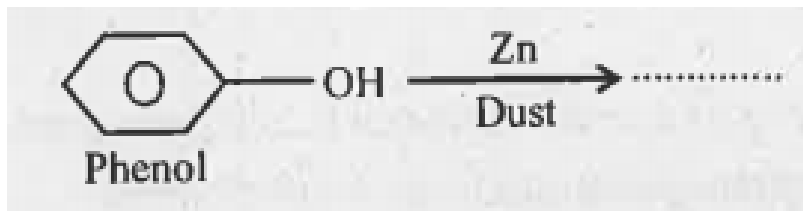▶ **Watch Video Solution**

5. Why do amines act as nucleophiles ?

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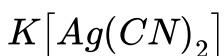**6.** True/False- Leaves hold the plant upright.

7. Complete the following:

8. Find the half life period of first order reaction whose rate constant, $k = 4.93 \times 10^{-4} s^{-1}$.

9. Write the IUPAC name of following :
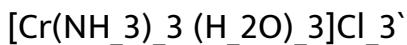
$K[Ag(CN)_2]$

10. Write the IUPAC name of following :

$[Cr(NH_3)_3 (H_2O)_3]Cl_3$`

11. A compound X and Y crystallises in the cubic structure in which Y atoms are at the corners and X atoms are at the alternate faces of the cube. Find the formulate of the compound.

12. Why Cu(l) is colourless and Cu(ll) is blue in colour ?

13. The rate constant for a first order reaction Is 90 s^{-1} .How much time will it take to reduce the concentration of the reactant to $\dfrac{1}{20^{th}}$ of its Initial value ?

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14. Define ore and minerals.

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15. Give monomers name and preparation of Nylon 6,6.

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16. All three classes of aliphatic amines are stronger bases tha ammonia. Explain.

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17. Write chemical name, deficiency disease and one source of vitamin-C.

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18. 18 g of glucose is dissolved in 1 kg of water. At what temperature will the solution boil ? (K_b for water is 0.52 K kg mol^{-1})

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19. State Henry's law and mention its some important applications.

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20. Why bond angle of Phosphine (PH_3) is less than Ammonia (NH_3) ?

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21. Why is H_2S less acidic than H_2 Te ?

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22. The molar conductivities at infinite dilution for sodium acetate, _hydrochloric acid and sodium cholride are 92.5,426.9

and 120.4 Scm^2mol^{-1} respectively at 298 K. Calculate the molar conductivity of acetic acid at infinite dilution.

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23. What is corrosion?

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24. Calculate the molar conductance of solutions of $MgCl_2$ at infinite dilution given that the molar Ionic-conduction of $\lambda^\circ(Mg^{2+}) = 126.1scm^2mol^{-1}$ and $\lambda^\circ(Cl^-) = 56.3scm^2mol^{-1}$.

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25. (i) Give two differences between emf and potential difference.

(ii) What is vulcanization of rubber ? Explain.

(iii) Write the names and structures of monomers of Buna-S

(iv) What is Blister copper ?

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26. Explain Reimer Tiemann reaction with one example.

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27. How will you convert chlorobenzene into phenol ?

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28. Why Phenols are more acidic than Alcohol ?

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29. Write two differences between physical adsorption and chemical adsorption.

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30. Define Emulsion

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31. Write Hell Volhard Zelinsky reaction.

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32. Why are the boiling points of carboxylic acids higher than the corresponding alcohols ?

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33. Explain why aldehydes are more reactive than ketones towards nucleophilic addition reactions ?

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34. A face centered cubic element (atomic mass =60) has edge length of 400pm. What is the density of unit cell

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35. Give one difference between crystalline and amorphous solids.

36. An element having a density 11.2g cm^{-3} forms a fcc lattice with edge of 4×10^{-3} cm. Calculate the atomic mass of the element.

37. Define unit cell and paramagnetic substance.

38. Write the following reaction:

Wurtz Fittig Reaction

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39. True/False- Stems absorb water and minerals from the soil.

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40. True/False- The plant gets nitrogen from air.

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41. Why solubility of Haloalkanes in water is very low ?

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42. Give one use of freon.

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43. Why nitrogen is important for the plants?

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44. Give the mechanism of substitution nucleophilic bimolecular, S_N^2 reactions.

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45. Define Optical activity.

46. Why SF_6 is known but SH_6 is not known ?

47. From HF and Hl which is more acidic and why ?

48. Give preparation of XeF_6 and $XeOF_2$.

49. True/False- The ovary is found in the stamen.

50. How many unpaired electrons are present in Fe^{+3} and Zn^{+2}.

51. Why is $La(OH)_3$ more basic than $Lu(OH)_3$?

52. Give preparation of Potassium Permanganate $(KMnO_4)$.

53. What is Lanthanide contraction ? What is the cause and consequences of Lanthanide contraction ?

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54. Why transition metals show catalytic properties?

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