CHEMISTRY

BOOKS - OMEGA PUBLICATION

SAMPLE QUESTION PAPER -I (PUNJAB)

Question

1. Functional group of monocarboxylic acids is

: – O H, – C H O, – C O O H. – C O O R

A. $-OH$

B. $-CHO$

C. $-COOH$

D. $-COOR$

Answer:

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2. Define critical temperature.

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3. Alkali metals are soft. Why ?

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4. Derive van der Waals' equation of State for n moles of gas.'

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5. What is Avogardro's number ?

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6. What is screening effect ?

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7. Ozone has bent structure.

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8. Give the IUPAC names of :$(CH_3)_3C-OH$.

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9. Define Ionic product of water. What is the effect of temprature on it?

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10. Which is a stronger Lewis acid and why ?

BF_3 OR BCl_3

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11. Define COD and BOD.

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12. Give reasons :

Cone. HNO_3 can be transported in aluminium container

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13. Dettol is a mixture of :

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14. CCl_4 is not hydrolysed but $SiCl_4$ can be hydrolysed with water. Why ?

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15. Give differences between electron affinity and electronegativity.

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16. Explain the action of acidic buffer.

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17. What is the difference between e.m.f. and potential diffrence?

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18. State Hess's law. Give two applications of it.

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19. Explain the deviations of real gases from ideal gases.

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20. Explain Dalton's law of partial pressures and Charles' law.

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21. What are electrophiles and nucleophiies? Give two examples in each case.

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22. Describe permutit process for softening hard water.

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23. Give the theory of manufacture of washing soda by Solvay's process.

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24. Alkali metals give blue solutions in ammonia. Why?

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25. Calculate the volume of 4.4 g of CO_2 at S.T.P.

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26. Define empirical formula and molecular formula ? How are they related to each other ?

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27. Balance the following equations by oxidation no. method.

$MnO_4^- + Fe^{2+} \rightarrow Mn^{2+} + Fe^{3+}$ (Acidic medium) .

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28. Balance the following equations by oxidation no. method.

$S + HNO_3 \rightarrow H_2SO_4 + NO_2 + H_2O.$

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29. Define oxidising agent and reducing agent on the basis of oxidation number concept.

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30. Distinguish between intermolecular and intramolecular H-bonds.

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31. Distinguish between σ and π orbitals.

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32. What are hybridisation states of each carbon atom in the following compound : (CH3)2CO

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33. Explain the shape of C_2H_4 molecule on the basis of hybridisation.

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34. Describe orbital picture of benzene.

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35. How will you convert benzene into

(a) Chlorobenzene

(b) Nitrobenzene

(c) Benzene sulphonic acid

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36. Give the laboratory preparation of ethene.

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37. Define peroxide effect .

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38. Ethyne is acidic in nature. Why ?

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39. Calculate n, l, m and s for 4f and 3d electrons.

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40. Explain Heisenberg's uncertainty principle. Give its significance.

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41. How Bohar's model differ from Rutherford's Model of atom.

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