CHEMISTRY

BOOKS - UNITED BOOK HOUSE

MODEL QUESTION PAPER 12

Exercise

1. No. of unpaired electron in Ni^{2+} ion—

A. 0

B. 2

C. 8

D. 4

Answer:

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2. Hybridisation of xe in xeF_2 :

A. Sp^3

B. Sp

C. Sp^3d^2

D. Sp^3d

Answer:

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3. Which one has least bond angle:

A. BeF_2

B. CH_4

C. NH_3

D. PH_3

Answer:

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4. Real gas behalves ideally at:

A. High temp & low pressure

B. Low temperature & high pressure

C. high temperature & high pressure

D. Low temperature and low pressure

Answer:

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5. Heat of formation of $C_{12}H_{22}O_{11}(S), CO_2(g) \& H_2O(I) are -530, -94.3 \& -68.3 KCal/mol$ respectively how much quantity of $C_{12}H_{22}O_{11}(S)$ can be burnt to get 2700 K Cal of heat:

A. 684gm

B. 692.6 gm

C. 832.74 gm

D. 463.9 gm

Answer:

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6. Enthalpy Change for exothermic process—

A. O

B. $-ve$

C. $+ve$

D. α

Answer:

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7. Solution of the compound having highest pH value:

A. CH_3COOK

B. Na_2CO_3

C. NH_4Cl

D. $NaNO_3$

Answer:

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8. Which one does not yield NO_2 on thermal decomposition:

A. $Cu(NO_3)_2$

B. $AgNO_3$

C. KNO_3

D. $Pb(NO_3)_2$

Answer:

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9. Initial input for solvely process—

A. Na_2SO_4

B. Camalite

C. Brine solution

D. None of these.

Answer:

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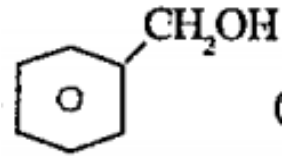
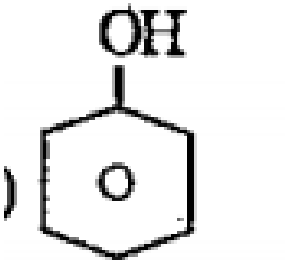
10. Which one has highest acidic nature:

A.

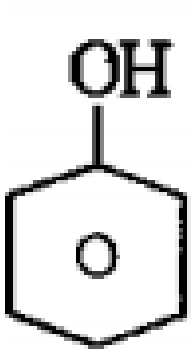


B.



C.

D.



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Answer:

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11. Which one shows tautomerism:

A. 2-pentanone

B. phenol

C. lacticacid

D. 2-butene

Answer:

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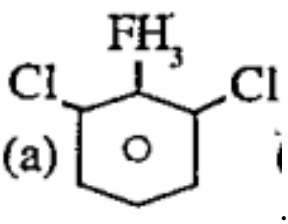
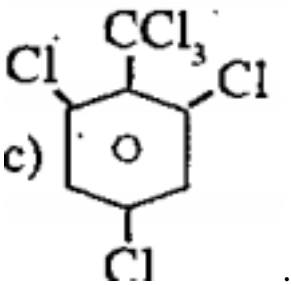
12. Major product obtained vvheh Cl_2 is passed through boiling toluene:

A.

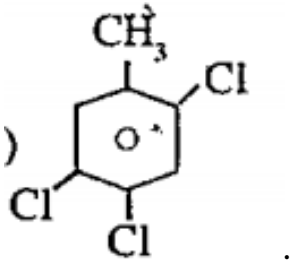


B.

C.



D.



Answer:

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13. Reagent which converts 2- hexyne to 2 - hexene :

A. $Pb/BaSO_4$

B. Pt / H_2

C. $LiAlH_4$

D. Li / NH_3

Answer:

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14. CFC- 11 is:

A. $CFCI_3$

B. $CHCI_3$

C. CH_2CI_2

D. CCI_4

Answer:

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15. 1 (N) H_2SO_4 solution contains how many moles H_2SO_4:

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16. Determine the emperical formula of benzene.

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17. Write the name of highest electronegative element.

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18. Name two element which shows diagonal relationship.

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19. What type of property heat capacity is?

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20. What is octane number?

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21. State whether Daltons atomic theory can explain Gay Lussac's gas volume law explain.

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22. Express 0.0004362 by significant notation. How many significant figure are there in the above number?

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23. State two limitations of Rutherford's atom model.

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24. What is isober? Write the magnitude' of Rydberg's Constant.

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25. How would you prepare:Boric acid form Colemanite.

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26. How would you prepare:Carbon monoxide from formic acid.

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27. How would-you establish the presences of special element in organic Compound:N_2.(Write only the process name and concerned chemical reaction)

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28. How would-you establish the presences of special element in organic Compound:S.(Write only the process name and concerned chemical reaction)

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29. What dp you mean by BOD & COD?

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30. Calculate the de Broglie Wavelength of an electron having kinetic energy 3.6 MeV.

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31. Calculate the frequency of the highest wavelength of balmer series.

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32. What do you mean by electronegetivity? Write its change across a period.

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33. Find the position of ${}_{17}A^{35}$ in periodic table indicate whether the element concerned is a metal or non metal.

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34. Illustrate with example: Sp-hybridisation.

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35. Find the hybridisation of the * marked element in the following compound.$\dot{P}Cl_5$, $\dot{C}OCl_2$, $\dot{S}O_3^{2-}$ &$\dot{N}H_4^{\oplus}$.

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36. What is the dipole moment of $\mathbb{C}I_4$?

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37. Write the Vanderwall's equation for real gas. Explain the term involved.Write the units for Vanderwall's constant 'a'.

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38. What do you mean by surface tension? Write its dimension. Write the S.I. unit of it.

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39. Calculate the entropy change of melting- of 5 gm ice. What type of function entropy is?

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40. ΔH and ΔS for a reaction at $27^{\circ}C$ are - $24kcalmol^{-1}$ & $24cal.\,mol^{-1}/K$ respetively predict about the spontainty of the process.

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41. Balance the euqation by oxidation no method:-

$SnCl_2 + HCl + O_3 \rightarrow SnCI_4 + H_2O$

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42. Balance by oxidation number method

$Cu + HNO_3 \rightarrow Cu(NO_3)_2 + NO_2 + H_2O.$

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43. Balance the following reaction by oxidation number method:

$MnO_2 + HCI \rightarrow MnCl_2 + CI_2 + H_2O.$

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44. How would you prepare H_2O_2 by electrolysis method? Is MnO_2 a peroxide?

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45. Why alkaline earth metal are respondant to flame test?

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46. 2.4 gm of silver salt of a monobasic organic acid when heated 1.24 gm silver is obtained. Determine the molecular weight of the acid.

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47. What type of equilibrium 'is this $3Fe(s) + (g)fFe_3O_4(S)4H_2(g)$ Discuss the effect of incorporation of inert gas at the homeogeneous

equlibrium at constant temperature and pressure.

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48. Why black precipital is formed when H_2S is passed through Pb^{2+} & Cu^{2+} soln in 0.3 (M) HC1 solution. What is common ion effect? Give example.

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49. State the reason:PbI_4 does not exist but PbF_4 fairly stable.

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50. Explains why CO_2 is gaseous while SiO_2 is a Solid?

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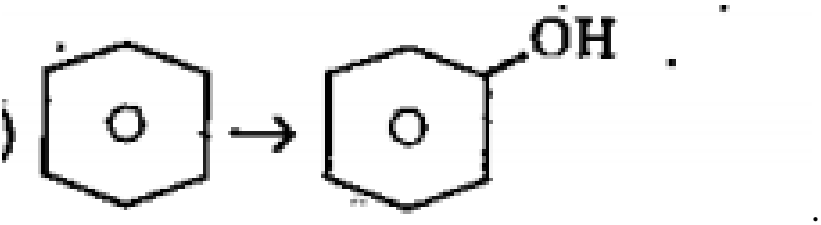
51. How would you carry out the following Conversion:



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