



Sky Tutorials

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IIT-JEE | NEET | Foundation
NEET

OFFICE & CLASSES: SKY TUTORIALS : KABIR NAGAR DURGAKUND, VARANASI CONTACT No. : 7510020006, 9696571381

CLASSROOM CONTACT PROGRAMME

(ACADEMIC SESSION 2023-2024)

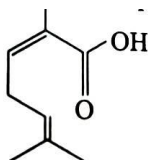
Ummeed Batch - Neet

Test Type: Chapter wise Test

Date: 07/11/2023

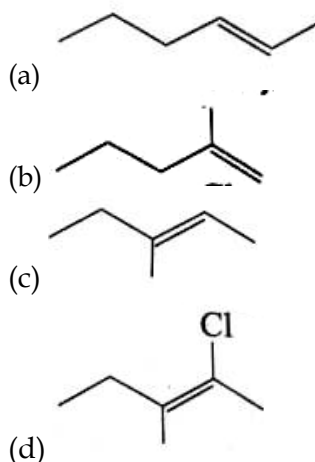
CHEMISTRY
CHEMISTRY
SECTION - A

1. The IUPAC name of the compound is

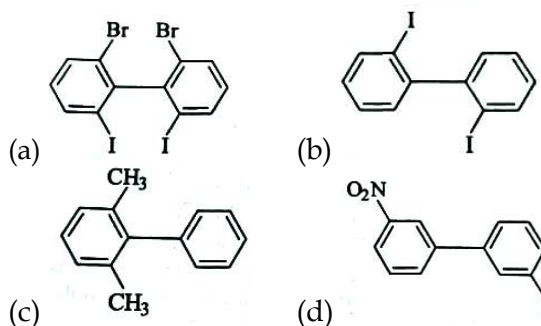


- (a) 2-ethenyl-3-methyl cyclohexa-1, 3-diene
 (b) 2, 5-dimethyl hepta-2, 6-dienoic acid
 (c) 2,6-dimethyl hepta-2, 5-dienoic acid
 (d) 2,3-dimethyl epoxyethane
2. The most stable geometrical isomer among the following is
- (a) (b)
- (c) (d)

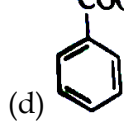
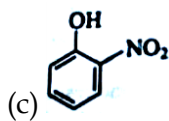
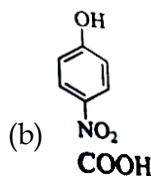
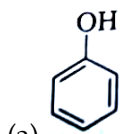
3. Which of the following compounds will not exhibit *cis-trans* isomerism?



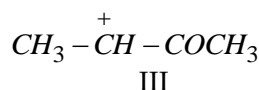
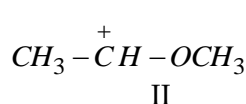
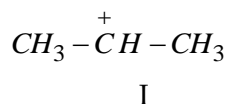
4. Which of the following biphenyls is optically active?



5. Most acidic is



6. The decreasing order of the stability of the ions



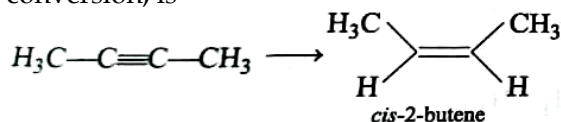
(a) I > II > III

(b) III > II > I

(c) II > III > I

(d) II > I > III

7. The most suitable reagent for the following conversion, is

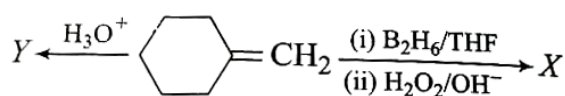


(a) $\text{H}_2, \text{Pd} / \text{C}$, quinoline

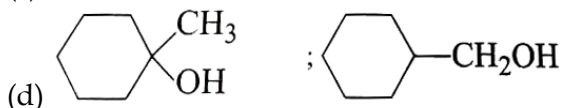
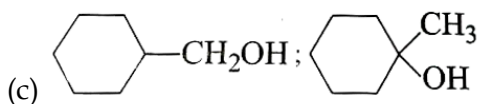
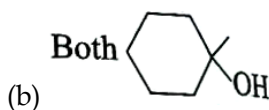
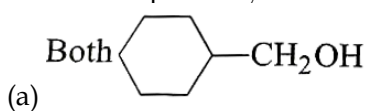
(b) Zn / HCl

(c) $\text{Hg}^{2+} / \text{H}^+, \text{H}_2\text{O}$

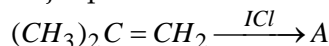
(d) $\text{Na} / \text{liquid NH}_3$



X and Y respectively are



9. Major product A of the reaction is



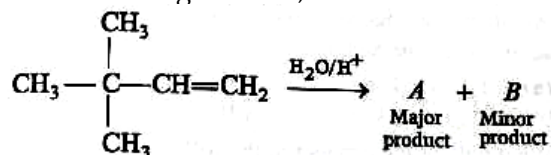
(a) 2-chloro-1-iodo-2-methyl propane

(b) 1-chloro-2-methyl propane

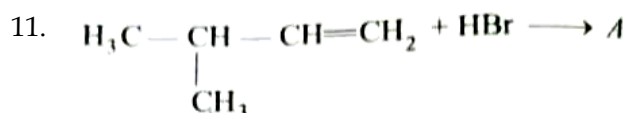
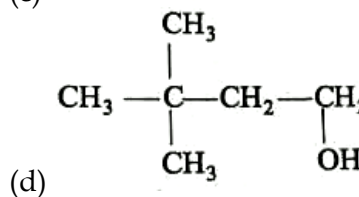
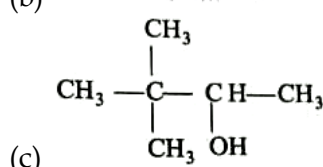
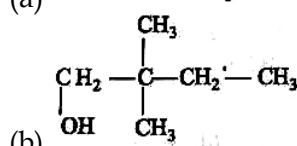
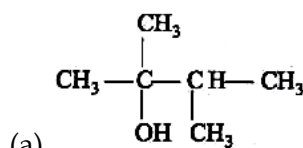
(c) 1, 2-dichloro-2-methyl propane

(d) 1, 2-diiodo-2-methyl propane

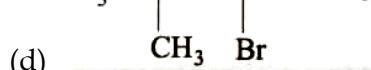
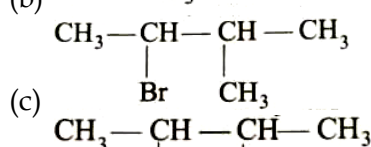
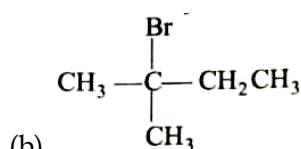
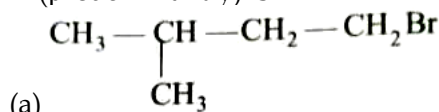
10. In the following reaction,



The major product is



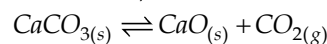
A (predominantly) is




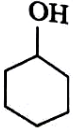
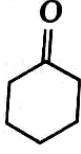
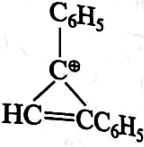
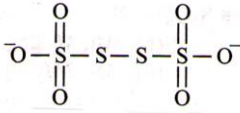
12. What is the value of K_c if K_b and k_f are 1.2×10^{-3} and 1.4×10^{-2} respectively?

(a) 11.66 (b) 0.88 (c) 1.166 (d) 8.8

13. Calculate K_c for the reversible process given below if $K_p = 167$ and $T = 800^\circ \text{C}$.



(a) 1.95 (b) 1.85 (c) 1.89 (d) 1.60

14. Which of the following is aromatic ?
- (a)  (b)  (c)  (d) 
15. A 20 litre container at 400 K contains $\text{CO}_2(\text{g})$ at pressure 0.4 atm and an excess of SrO (neglect the volume of solid SrO). The volume of the container is now decreased by moving the movable piston fitted in the container. The maximum volume of the container, when pressure of CO_2 attains its maximum value, will be.
 (Given that : $\text{SrCO}_3(\text{s}) \rightleftharpoons \text{SrO}(\text{s}) + \text{CO}_2(\text{g}), K_p = 1.6$ atm)
- (a) 10 litre (b) 4 litre (c) 2 litre (d) 5 litre
16. A monobasic weak acid solution has a molarity of 0.005 M and pH of 5. What is its percentage ionization in this solution?
 (a) 2.0 (b) 0.2 (c) 0.5 (d) 0.25
17. The oxidation states of S atoms $\text{S}_4\text{O}_6^{2-}$ from left to right respectively are
- 
- (a) +6, 0, 0, +6 (b) +3, +1, +1, +3
 (c) +5, 0, 0, +5 (d) +4, +1, +1, +4
18. H_5IO_6 is a
 (a) strong reducing agent
 (b) strong base
 (c) strong oxidizing agent
 (d) weak base.
19. The ratio between kinetic energy and the total energy of the electrons of hydrogen atom according to Bohr's model is :
 (a) 1 : 1 (b) 1 : 5 (c) 1 : 2 (d) 2 : 1
20. The ratio of the difference in energy of electron between the first second Bohr's orbit to that between second and third Bohr's orbit is:
 (a) $\frac{1}{3}$ (b) $\frac{27}{5}$ (c) $\frac{9}{4}$ (d) $\frac{4}{9}$
21. Of the following transitions in hydrogen atom, the one which gives an absorption line of maximum wavelength is:
 (a) $n = 1$ to $n = 2$ (b) $n = 3$ to $n = 8$
 (c) $n = 2$ to $n = 1$ (d) $n = 8$ to $n = 3$
22. The number of electrons in sulphur atom having $n + l = 3$
 (a) 2 (b) 4 (c) 6 (d) 8
23. Maximum numbers of electrons in a subshell is given by:
 (a) $2l + 1$ (b) $2(2l + 1)$
 (c) $(2l + 1)^2$ (d) $2(2l + 1)^2$
24. The 3d - orbitals having electron density in all the three axes is:
 (a) $3d_{xy}$ (b) $3d_{z^2}$ (c) $3d_{yz}$ (d) $3d_{zx}$
25. The number of nodes in a 4d - orbital is:
 (a) 0 (b) 1 (c) 2 (d) 3
26. Number of electrons present in 6 g of CO_3^{2-} is.
 (a) 1.806×10^{24} (b) 1.9264×10^{24}
 (c) 3.7324×10^{24} (d) None of these
27. 20 moles of A and 14 moles of B are mixed and allowed to react according to the equation.
 $\text{A} + 2\text{B} \rightarrow 3\text{C}$
 What is the maximum number of moles of C which could be prepared?
 (a) 14 (b) 21 (c) 13 (d) 7
28. The empirical formula and molecular mass of a compound are CH_2O and 180 g respectively. What will be the molecular formula of the compound?
 (a) $\text{C}_9\text{H}_{18}\text{O}_9$ (b) CH_2O
 (c) $\text{C}_6\text{H}_{12}\text{O}_6$ (d) $\text{C}_2\text{H}_4\text{O}_2$
29. For the reaction $\text{A} + 2\text{B} \rightarrow \text{C}$, 5 mol of A and 8 mol of B will produce
 (a) 5 mole of C (b) 4 mole of C
 (c) 8 mole of C (d) 13 mole of C
30. Which of the following contains the least number of molecules?
 (a) 4.4 g CO_2 (b) 3.4 g NH_3
 (c) 1.6 g CH_4 (d) 3.2 g SO_2
31. Which of the following species are hypervalent?
 1. ClO_4^- 2. BF_3 3. SO_4^{2-} 4. CO_3^{2-}
 (a) 1, 2, 3 (b) 1, 3 (c) 3, 4 (d) 1, 2
32. An ionic bond $\text{A}^+ + \text{B}^-$ is most likely to be formed when
 (a) the ionization energy of A is high and the electron affinity of B is low
 (b) the ionization energy of A is low and the electron affinity of B is high
 (c) the ionization energy of A and the electron affinity of B is high
 (d) the ionization energy of A and the electron affinity of B is low.

33. The correct order of the increasing ionic character is.
- (a) $BeBr_2 < MgBr_2 < CaBr_2 < BaBr_2$
 (b) $BeBr_2 < MgBr_2 < BaBr_2 < CaBr_2$
 (c) $BeBr_2 < BaBr_2 < MgBr_2 < CaBr_2$
 (d) $BaBr_2 < MgBr_2 < CaBr_2 < BeBr_2$
34. $SnCl_4$ is a covalent liquid because.
- (a) Electron clouds of the Cl^- ions are weakly polarized to envelop the cation
 (b) Electron clouds of the Cl^- ions are strongly polarized to envelop the cation
 (c) Its molecules are attracted to one another by strong van der Waals forces
 (d) Sn shows inert pair effect.
35. NH_3 and BF_3 combine readily because of the formation of:
- (a) a covalent bond (b) a hydrogen bond
 (c) a coordinate bond (d) an ionic bond
- SECTION- B**
36. Which of the following has been arranged in increasing order of size of the hybrid orbitals?
- (a) $sp < sp^2 < sp^3$ (b) $sp^3 < sp^2 < sp$
 (c) $sp^2 < sp^3 < sp$ (d) $sp^2 < sp < sp^3$
37. Consider the following molecules:
- | | | | |
|--------|--------|---------|---------|
| H_2O | H_2S | H_2Se | H_2Te |
| I | II | III | IV |
- Arrange these molecules in increasing order of bond angles
- (a) $I < II < III < IV$ (b) $IV < III < II < I$
 (c) $I < II < IV < III$ (d) $II < IV < III < I$
38. For BF_3 molecules which of the following is true?
- (a) B - atom is sp^2 hybridised
 (b) There is a $P\pi - P\pi$ back bonding in this molecule
 (c) Observed B - F bond length is found to be less than the expected bond length
 (d) All of these
39. Of the following molecules, the one, which has permanent dipole moment, is.
- (a) SiF_4 (b) BF_3 (c) PF_3 (d) PF_5
40. Which of the following has the least dipole moment?
- (a) NF_3 (b) CO_2 (c) SO_2 (d) NH_3
41. Which of the following is least volatile?
- (a) HF (b) HCl (c) HBr (d) HI
42. Which one of the following does not have intermolecular H - bonding?
- (a) H_2O (b) o - nitro phenol
 (c) HF (d) CH_3COOH
43. Among the following species, which has the minimum bond length?
- (a) B_2 (b) C_2 (c) F_2 (d) O_2^-
44. Which of the following have bond order three?
- (a) O_2^+ (b) NO^+ (c) CN^- (d) CN^+
45. In PO_4^{3-} ion the formal charge on the oxygen atom of P - O bond is.
- (a) + 1 (b) - 1 (c) - 0.75 (d) + 0.75
46. Number of π bonds and σ bonds in Naphthalene is.
- (a) 6, 19 (b) 4, 20 (c) 5, 19 (d) 5, 20
47. The molecular formula of the compound formed from B and C will be.
- (a) BC (b) B_2C (c) BC_2 (d) B_4C_3
48. Which one of the following is the correct of interactions?
- (a) Covalent < hydrogen bonding < vander Waals < dipole - dipole
 (b) Vander Waals < hydrogen bonding < dipole - dipole < covalent
 (c) Vander Waals < dipole - dipole < hydrogen bonding < covalent
 (d) Dipole - dipole < vander Waals < hydrogen bonding < covalent
49. Match the columns
- | | Column - I | | Column - II |
|----|------------|-----|----------------------------------|
| A | BeH_2 | (p) | Odd electron molecules |
| B. | SF_6 | (q) | Expanded octet |
| C. | NO_2 | (r) | Incomplete octet of central atom |
- (a) A - (p), B - (q), C - (r)
 (b) A - (q), B - (r), C - (p)
 (c) A - (r), B - (q), C - (p)
 (d) A - (r), B - (p), C - (q)
50. **Assertion:** Shape of NH_3 molecule is tetrahedral.
Reason: In NH_3 nitrogen is sp^3 hybridized
- (a) Assertion is correct, reason is correct; reason is a correct explanation for assertion
 (b) Assertion is correct, reason is correct; reason is not a correct explanation for assertion
 (c) Assertion is correct, reason is incorrect
 (d) Assertion is incorrect, reason is correct