



CHEMISTRY

BOOKS - NTA MOCK TESTS

NEET MOCK TEST 11

Chemistry

1. Enthalpy of atomization of $C_2H_6(g)$ and $C_3H_8(g)$ are 620 and 880 kJ mol^{-1} respectively. The C-C and C-H bond energies are respectively

A. 80 and 60 kJ mol^{-1}

B. 80 and 90 kJ mol^{-1}

C. 70 and 90 kJ mol^{-1}

D. 200 and 80 kJ mol^{-1}

Answer:



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2. Which is the wrong pair?

(i) Starch solution : sol (ii) Aq. NaCl : true solution (iii) Milk : emulsion (iv) Aq. BaSO_4 : true solution

The correct choice is :

A. (i)

B. (iii)

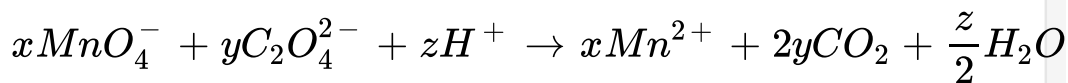
C. (iv)

D. (ii)

Answer:

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3. Consider the following reaction :



The value of x, y and z in the reaction are, respectively.

A. 2,5 and 16

B. 5,2 and 8

C. 5,2 and 16

D. 2,5 and 8

Answer:



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4. A solution of sucrose (molar mass = 342 g/mol) is prepared by dissolving 68.4 g of it per litre of solution, what is its osmotic pressure at 273 K?

$$(R = 0.081 \text{ LatmK}^{-1} \text{ mol}^{-1})$$

A. 4.48 atm

B. 2 atm

C. 1 atm

D. 5 atm

Answer:



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5. At what temperature is the rms speed of H_2 molecules the same as that of oxygen molecules at $1327^\circ C$?

A. 173K

B. 100K

C. 400K

D. 523K

Answer:



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6. Determine the degree of association (polymerisation) for the following reaction in aqueous solution ?



If observed (mean) molar mass of $HCHO$ and $C_6H_{12}O_6$ is $150g/mol$.

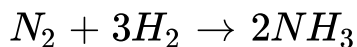
- A. 0.5
- B. 0.833
- C. 0.9
- D. 0.96

Answer:



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7. In the following reaction, we start with 2 mol of N_2 and 5 mol of H_2 exerting a total pressure of 7 atm at a given temperature in a closed vessel. When 50% of N_2 is converted into NH_3 .



Partial pressure of NH_3 is:

- A. 2.8 atm
- B. 2 atm
- C. 3.2 atm
- D. 4 atm

Answer: B



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8. A signature written with carbon pencil weighs 1 mg. What is the number of carbon atoms present in the signature?

A. 6.02×10^{20}

B. 0.502×10^{20}

C. 5.02×10^{23}

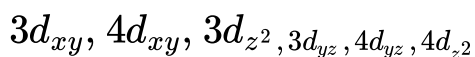
D. 5.02×10^{20}

Answer:



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9. Which of the following orbitals are degenerate?



A. $3d_{xy}$, $3d_{z^2}$, $3d_{yz}$

B. $4d_{xy}$, $3d_{z^2}$, $3d_{yz}$

C. $3d_{z^2}$, $3d_{yz}$, $5d_{z^2}$

D. none of these

Answer:



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10. Which of the following is a correct set ?

A. H_2O , sp^3 , angular

B. H_2O , sp^2 , linear

C. NH_4^+ , dsp^2 , square planar

D. CH_4 , dsp^2 , tetrahedral

Answer:

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11. The correct order of the second ionisation potential of carbon, nitrogen, oxygen and fluorine is

A. $F > O > N > C$

B. $C > N > O > F$

C. $O > F > N > C$

D. $O > N > F > C$

Answer:

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12. Al^{3+} has low ionic radius than Mg^{2+} because

- A. Al^{3+} has high nuclear charge than Mg^{2+}
- B. Mg atom has less no. of neutrons than Al atom
- C. Mg and AL Differ in electronegativity values
- D. Al atom has low IE value than Mg atom

Answer:

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13. Both lithium and magnesium display several similar properties due to the diagonal relationship, however, the one which is incorrect is

A. Both form soluble bicarbonates

B. Both form nitrides

C. Nitrates of both Li and Mg yield NO_2 and O_2 on heating

D. Both form basic carbonate

Answer:



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14. A mixture of 1.0 mole of Al and 3.0 mole of Cl_2 are allowed to react as:

$2Al(s) + 3Cl_2(g) \rightarrow 2AlCl_3(g)$. Then moles of excess reagent left unreacted is:

A. 3.5

B. 1

C. 1.5

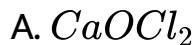
D. 2.5

Answer:



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15. Which one of the following is present as an active ingredient in bleaching powder for bleaching action?



Answer:



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16. n-propyl bromide on treatment with ethanolic potassium hydroxide produces

A. Propene

B. Propane

C. Propyne

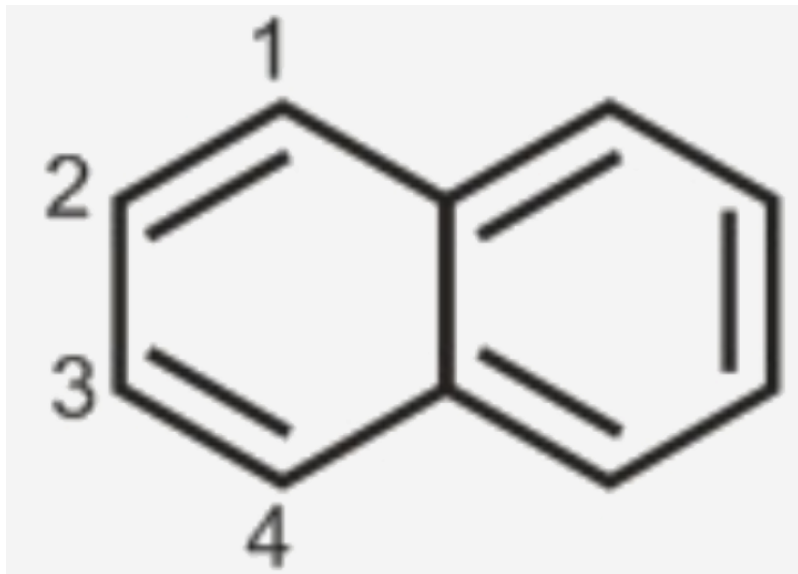
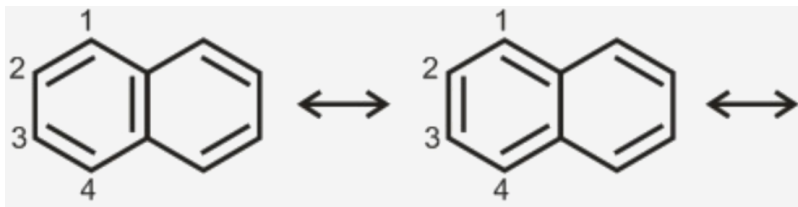
D. Propanol

Answer:



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17.



There are three canonical structures of naphthalene. Examine them and find correct statement among the following:

- A. $C_1 - C_2$ bond is longer than $C_2 - C_3$ bond.
- B. all c-c bonds are of same length

C. c1-c2 bond is shorter than c2-c3 bond.

D. none

Answer:



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18. Which one of the following types of drugs reduces fever?

A. Analgesic

B. Antipyretic

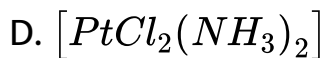
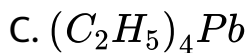
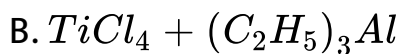
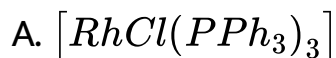
C. Antibiotic

D. Tranquiliser

Answer:

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19. Which of the following is called wilkinson's catalyst?



Answer:

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20. Baeyer's reagent is:

- A. alkaline permanganate solution
- B. acidified permanganate solution
- C. neutral permanganate solution
- D. aqueous bromine solution

Answer:

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21. Which of the following is/are correct statement(s)?

- A. Acetophenone is an ether
- B. Diastase is an enzyme

C. Cycloheptane is aromatic compound

D. all of the above

Answer:



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22. Heating mixture of Cu_2O and Cu_2S will give

A. $Cu + SO_2$

B. $Cu + SO_3$

C. $CuO + CuS$

D. Cu_2SO_3

Answer:



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23. The correct charge on and co-ordination number of

'Fe' in $K_3[Fe(CN)_6]$ is

A. +2, 4

B. +3, 6

C. +2, 6

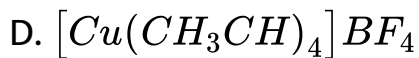
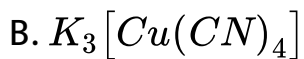
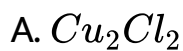
D. +3, 3

Answer:



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24. Among the following the coloured compound is .

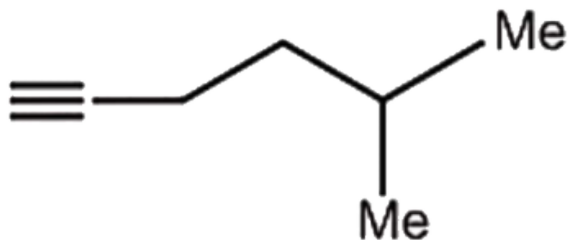


Answer:



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25. The IUPAC name of the following compound is



- A. 5-methyl-hex-1-yne
- B. 4-methyl-hex-2-yne
- C. 3-methyl-hex-6-yne
- D. 2-methyl-hex-4-yne

Answer:

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26. Energy of an electron is given by

$$E = -2.178 \times 10^{-18} J \left(\frac{Z^2}{n^2} \right).$$

Wavelength of light required to excite an electron in an hydrogen atom from level $n = 1$ to $n = 2$ will be

$$(h = 6.62 \times 10^{-34} Js \text{ and } c = 3.0 \times 10^8 ms^{-1}).$$

A. $6.500 \times 10^{-7} m$

B. $8.500 \times 10^{-7} m$

C. $1.214 \times 10^{-7} m$

D. $2.816 \times 10^{-7} m$

Answer:



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27. Which one of the following orders is not in accordance with the property stated against it ?

A. $F_2 > Cl_2 > Br_2 > I_2$, Bond dissociation energy

B. $F_2 > Cl_2 > Br_2 > I_2$, Oxidising power

C. $HI > HBr > HCl > HF$: acidic property in water

D. $F_2 > Cl_2 > Br_2 > I_2$: Electronegativity.

Answer:

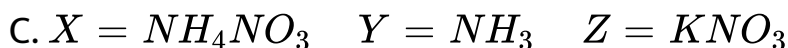
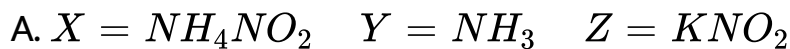
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28. $(X) \xrightarrow{KOH} (Y)$ (gas turns red litmus blue)+

$(Z) \xrightarrow{Zn + KOH} (Y)$ (gas).

(X) $\xrightarrow{\Delta}$ gas (does not support combustion) identify (X)

to (Z):



D. none of these

Answer:

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29. Observation of "Rhumann's purple "is confirmatory test for the presence of :

A. Starch

B. Reducing sugar

C. Protein

D. Cupric ion

Answer:



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30. The compound on dehydrogenation gives a ketone. The original compound is :

A. Primary alcohol

B. Secondary alcohol

C. Tertiary alcohol

D. Tertiary alcohol

Answer: A::B::C::D

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31. For a reaction $1/2A \rightarrow 2B$, rate of disappearance of A is related to the rate of appearance of B by the expression:

A.
$$\frac{-d[A]}{dt} = \frac{1}{2} \frac{d[B]}{dt}$$

B.
$$\frac{-d[A]}{dt} = 4 \frac{d[B]}{dt}$$

C.
$$\frac{-d[A]}{dt} = \frac{1}{4} \frac{d[B]}{dt}$$

D.
$$\frac{-d[A]}{dt} = \frac{d[B]}{dt}$$

Answer:

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32. Which of the following chemical test can distinguish between methylamine and dimethylamine?

A. Carbylamines test

B. Fehling's test

C. Lucas test

D. Tollen's test

Answer:

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33. Electrovalent bond-formation depends on:

A. ionization energy

B. lattice energy

C. electron affinity

D. all of these

Answer:



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34. 0.01 M solution of KCl and $CaCl_2$ are separately prepared in water. The freezing point of KCl is found to be

$-2^{\circ}C$. What is the freezing point of $CaCl_2$ aq. Solution if it is completely ionized?

A. $-3^{\circ}C$

B. $+3^{\circ}C$

C. $-2^{\circ}C$

D. $-4^{\circ}C$

Answer:

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35. One desires to prepare a positively charged sol of silver iodide. This can be achieved by:

A. Adding a little $AgNO_3$ solution to KI solution in slight excess

B. Adding a little KI solution to $AgNO_3$ solution in slight excess

C. Mixing equal volumes of equimolar solutions of $AgNO_3$ and KI

D. None of these

Answer:

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36. Spin only magnetic moment of the compound $Hg[Co(SCN)_4]$ is

A. $\sqrt{3}$

B. $\sqrt{15}$

C. $\sqrt{24}$

D. $\sqrt{8}$

Answer:



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37. Identify the element that forms amphoteric oxide.

A. Carbon

B. Zinc

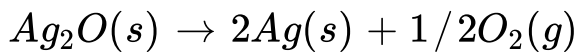
C. Calcium

D. Sulphur

Answer:

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38. The temperature at which the reaction,



Is at equilibrium is ..., Given $\Delta H = 30.5KJmol^{-1}$ and $\Delta S = 0.066KJK^{-1}$

A. 462.6K

B. 486.4K

C. 364.5K

D. 521.2K

Answer:

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39. Which of the following statements is correct of the manufacture of sulphuric acid by contact process?

- A. V_2O_5 is used for catalytic oxidation of SO_2 to SO_3 .
- B. SO_3 is absorbed in concentrated sulphuric acid.
- C. SO_3 is directly absorbed in water.
- D. Both the statements V_2O_5 is used for catalytic oxidation of SO_2 to SO_3 and SO_3 is absorbed in concentrated sulphuric acid are correct

Answer:

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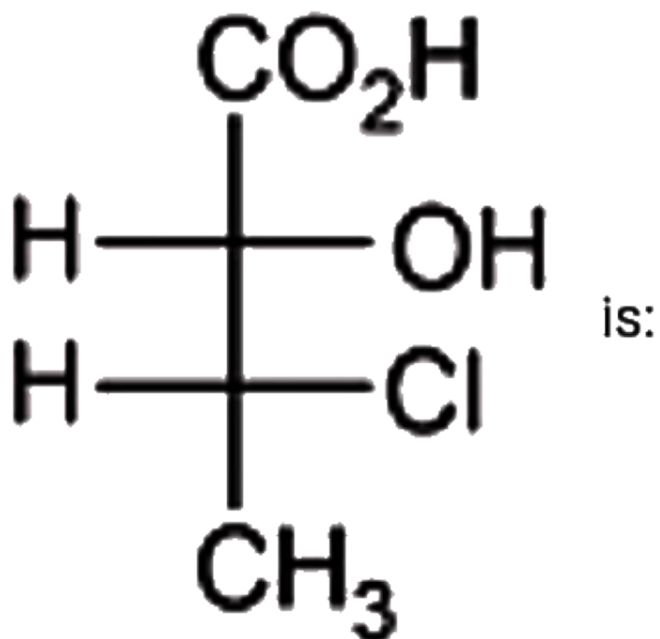
40. The number and type of bonds between two carbon atoms in calcium carbide are

- A. Two sigma, two pi
- B. two sigma, one pi
- C. one sigma, two pi
- D. one sigma, one pi

Answer:

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41. The absolute configuration of



A. (2S,3S)

B. (2R,3R)

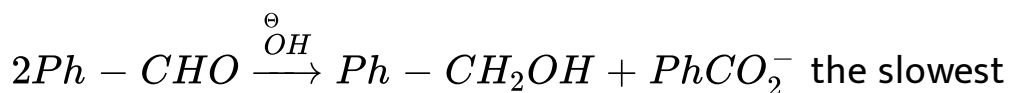
C. (2R,3S)

D. (2S,3R)

Answer:

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42. In the Cannizzaro reaction given below:



step is:

- A. The attack of $-OH$ at the carbonyl group
- B. The transfer of hydride to the carbonyl group
- C. The abstraction of proton from the carboxylic acid
- D. None

Answer:

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43. The colour and magnetic nature of manganate ion (MnO_4^{2-}) is

- A. Green, paramagnetic
- B. Purple, diamagnetic
- C. Green, diamagnetic
- D. Purple, paramagnetic

Answer:

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44. Which of the following does not possess a carboxy group?

A. Picric acid

B. Ethanoic acid

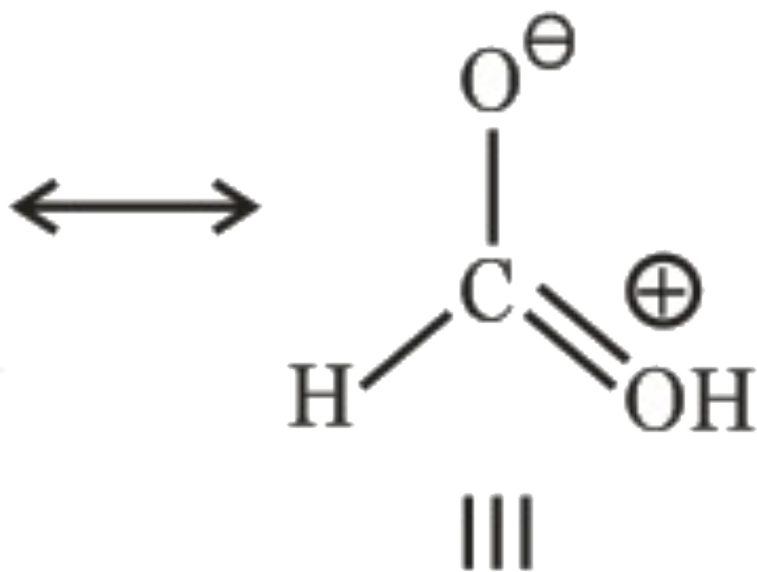
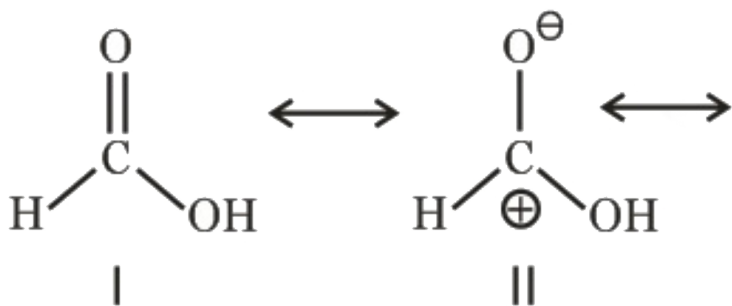
C. Aspirin

D. Benzoic acid

Answer:



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Among these canonical structures, the correct order of stability is

A. I > II > III

B. III > II > I

C. I > III > II

D. II > I > III

Answer:



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