



CHEMISTRY

BOOKS - NTA MOCK TESTS

NTA TPC JEE MAIN TEST 72

Chemistry

1. What is the formal charge on $SnCl_3^-$ in ion?

- A. +1
- B. -1
- C. 0
- D. -2

Answer: B



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2. The element having outer electronic configuration as $3d^6 4s^2$ is a:

- A. metalloid
- B. non- metal
- C. transition metal
- D. noble gas

Answer: C

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3. Dimethyl ether have boiling point less than ethanol though they have the same molecular weight. This is due to:

- A. Resonance
- B. Coordinate bonding

C. Hydrogen bonding

D. Ionic bonding

Answer: C

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4. Which of the following acts as the stationary phase in paper chromatography:

A. Water

B. Alumina

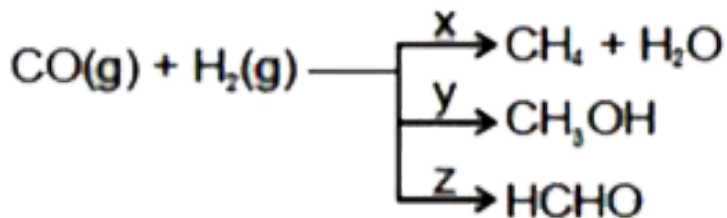
C. Silica gel

D. Alcohol

Answer: A

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5. What are the most suitable catalysts for the following conversions?



A. $x = \text{Ni}$, $y = \text{Cu} - \text{ZnO} / \text{Cr}_2\text{O}_3$, $z = \text{Cu}$

B. $x = \text{Cu} - \text{ZnO} / \text{Cr}_2\text{O}_3$, $y = \text{Cu}$, $z = \text{Ni}$

C. $x = \text{Ni}$, $y = \text{Cu}$, $z = \text{Cu} - \text{ZnO} / \text{Cr}_2\text{O}_3$

D. $x = \text{Cu}$, $y = \text{Cu} - \text{Zn} / \text{Cr}_2\text{O}_3$, $z = \text{Ni}$

Answer: A



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6. Which of the following does/do not exhibit optical isomerism

A. Tetrahedral complexes

B. Square planar complexes

C. Octahedral complexes

D. Polynuclear complexes

Answer: B



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7. Which is manufactured by electrolysis of fused NaCl :

A. NaClO_3

B. NaCO

C. NaOH

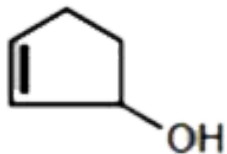
D. Na

Answer: B

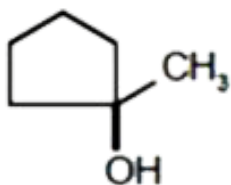


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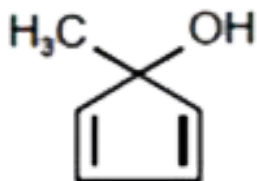
8. Among the following alcohols, the one which is the least reactive towards dehydration in acidic medium is



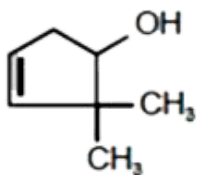
A.



B.



C.

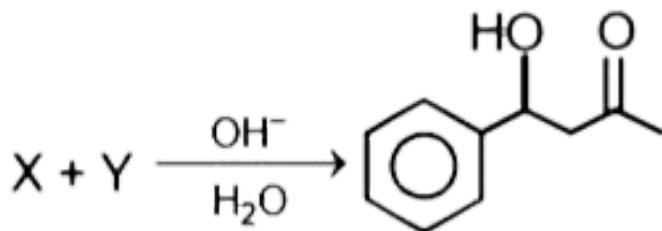


D.

Answer: C

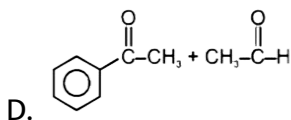
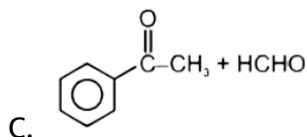
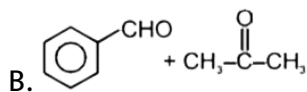
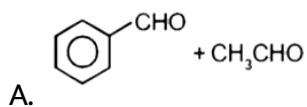


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9.

To obtain the desired product, the correct X and Y reactants should be:



Answer: B



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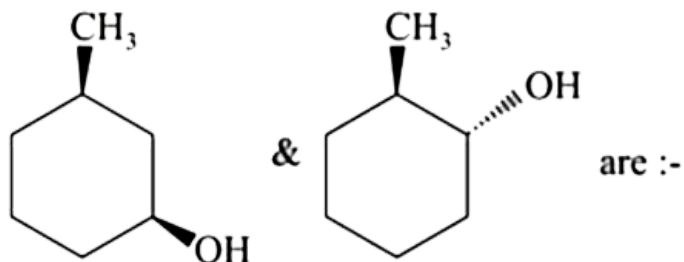
10. Through which of the following reaction number of carbon atoms can be decreased in the chain:

- A. Wurtz reaction
- B. HVZ reaction
- C. Hoffmann bromamide reaction
- D. Wolff-kishner reaction

Answer: C

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11. What is relation between the following pairs



- A. identical
- B. Geometrical isomer
- C. Positional isomer
- D. (2) & (3) both

Answer: C

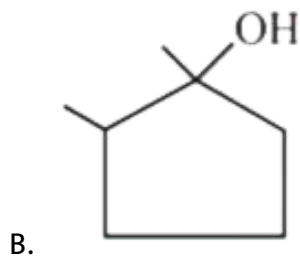
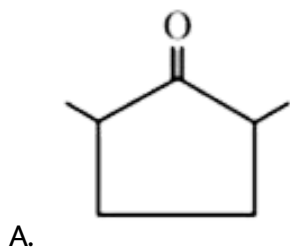
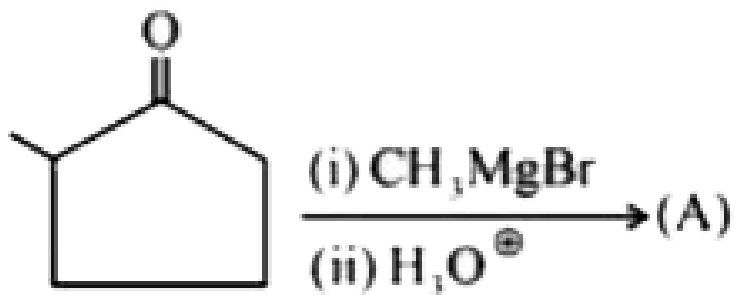
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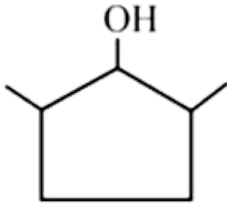
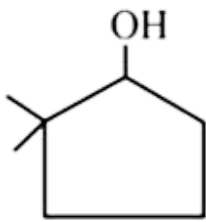
12. The number of isomers for the compound with molecular formula C_2BrClF_I is :

- A. 2
- B. 4
- C. 5
- D. 6

Answer: D

13. Product (A) of the following reaction is :





Answer: B

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14. The number of tetrahedral and octahedral voids in hexagonal primitive unit cell are:

A. 8, 4

B. 2, 1

C. 12, 6

D. 6, 12

Answer: C

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15. Vapour pressure of solution of benzene ($P^\circ = 120$ torr) and toluene ($P^\circ = 80$ torr) having 2 moles of each is:

- A. 400 torr
- B. 200 torr
- C. 100 torr
- D. 50 torr

Answer: C

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16. At NTP 2.24 L of a gas weight 3.65 g. The mole of the gas in 18.25 g is :

A. 0.25

B. 0.50

C. 0.75

D. 1

Answer: B



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17. One mole of an ideal gas present in a closed vessel, is compressed to one third of its original volume under constant temperature then % increase in pressure of gas is -

A. 100 %

B. 33 %

C. 200 %

D. 50 %

Answer: C

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18. The difference between n^{th} and $(n + 1)^{\text{th}}$ Bohr's radius of H atom is equal to its $(n - 1)^{\text{th}}$ Bohr's radius. The value of n is :

A. 1

B. 2

C. 3

D. 4

Answer: D

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19. For a first order reaction $A \rightarrow \text{Products}$, the concentration of [A] is reduced from 1 M to 0.25 M in one hour, the $t_{1/2}$ of this reaction (in sec)

is :

A. 600

B. 300

C. 1800

D. 0.693 / 1200

Answer: C



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20. Enthalpy of neutralisation of HCl by NaOH is -55.84 kJ / mol and by NH_4OH is -51.34 kJ / mol . The enthalpy of ionization of NH_4OH is :-

A. 107.18 kJ/mol

B. 4.5 kJ / mol

C. -4.5 kJ / mol

D. 3.5 kJ / mol

Answer: B

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21. Among the following, the number of ligands in which donor atom(s) is/are only N is _____ en, EDTA, dien, dmg, NH_3 , gly

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22. Total number of Oxygen doubly bonded to Sulphur in pyrosulphuric acid is ____

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23. Among the ions given below, the total number of diamagnetic species is _____

Yb^{2+} ($Z = 70$), Lu^{3+} ($Z = 71$), La^{3+} ($Z = 57$), Ce^{4+} ($Z = 58$), Nd^{3+} ($Z =$

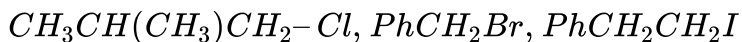
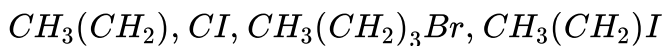
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24. Among the following, total number of essential amino acids is _____

Arginine, threonine, valine, proline, methionine, lysine, tryptophan, serine.

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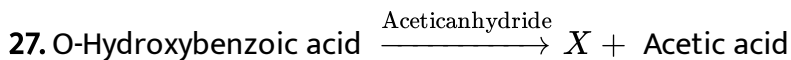
25. In following reaction, count the number of alkyl halides that cannot be prepared by Finkelstein reaction?



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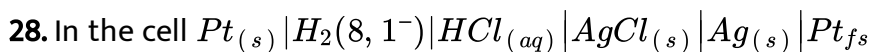
26. What is the value of X if the total number of possible geometrical isomers for the octahedral complex $[M(AA)abcd]$ is $2x$? (AA) - symmetrical bidentate ligand, a,b,c,d monodentate ligands.)

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The total number of T-bonds present in product 'X' is ____ .

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The cell potential is 0.92 V when a 10^{-6} molal HCl solution is used. The standard electrode potential of $(AgCl / Ag, Cl^-)$ electrode is ____ V.

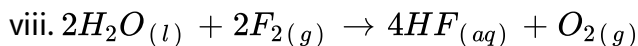
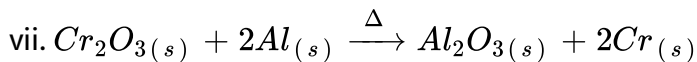
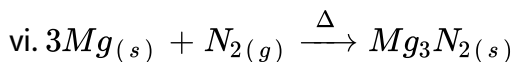
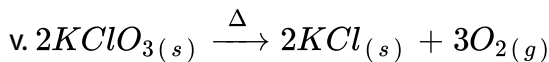
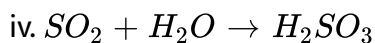
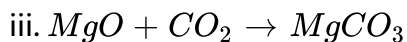
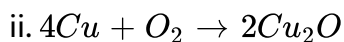
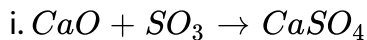
(Given, $\frac{2.303RT}{F} = 0.06V$ at 298 K)

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29. The $[H^+]$ ion concentration present in 0.01 mol dm^{-3} acetic acid solution is ____ 10^{-4} mol dm^3 . (Given: $\sqrt{K_a} = 4.17 \times 10^{-3}$).

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30. Total number of redox reactions among the given reactions is



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