



CHEMISTRY

BOOKS - NTA MOCK TESTS

NTA NEET SET 90

Chemistry

1. Identify the compound in which phosphorus exists in the oxidation state of +1.

A. Phosphonic acid (H_3PO_3)

B. Phosphinic acid (H_3PO_2)

C. Pyrophosphorus acid ($H_4P_2O_5$)

D. Orthophosphoric acid (H_3PO_4)

Answer: B



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2. The number of isomers of the aromatic compound C_8H_{10} is :

A. 3

B. 4

C. 2

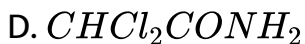
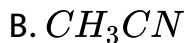
D. 5

Answer: B



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3. Acetamide when heated with PCl_5 gives



Answer: C

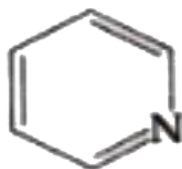


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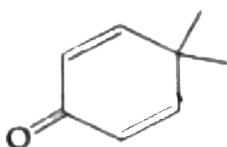
4. Which of the following molecules is least resonance stabilised?



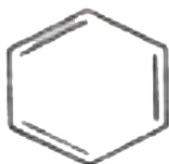
A.



B.



C.

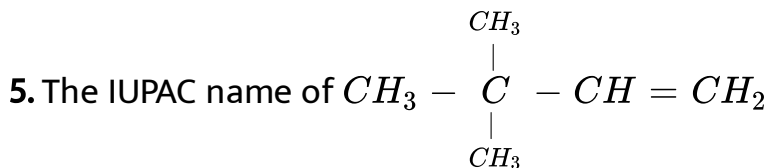


D.

Answer: C



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is -

- A. 2,2 - Dimethyl -3- butane
- B. 2,2 - Dimethyl -4- pentene
- C. 3,3 - Dimethyl - 1- butene
- D. 1 - Hexene

Answer: C



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6. The structure of H_2O_2 is

- A. Spherical

B. Non - planar

C. Planar

D. Linear

Answer: B



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7. Zone refining is a technique used primarily for the one of the following process

A. Alloying

B. Tempering

C. Sintering

D. Purification

Answer: D

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8. Ethyl isocyanide on hydrolysis in acidic medium generates:

- A. Propanoic acid and ammonium salt
- B. Ethanoic acid and ammonium salt
- C. Methylamine salt and ethanoic acid
- D. Ethylamine and methanoic acid

Answer: D

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9. The conductivity of a strong electrolyte:

- A. Increases on dilution slightly
- B. Decreases on dilution
- C. Does not change with dilution
- D. Depends upon density of electrolyte itself

Answer: A



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10. In which case, hybridisation of the central atom is affected when :

- A. NH_3 changes to NH_4^+
- B. AlH_3 changes to AlH_4^+
- C. In both cases

D. Is none case

Answer: D



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11. The temperature of 20 L of nitrogen was increased from 10 K to 30 K at a constant pressure. Change in volume will be

A. 20 L

B. 40 L

C. 60 L

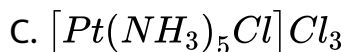
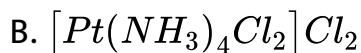
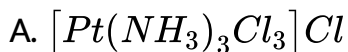
D. 80 L

Answer: B



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12. Which of the following 0.1 M complex compound solutions will have the minimum electrical conductivity ?



D. Hexaammine platinum (iv) chloride

Answer: A



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13. Which of the following is an amorphous substance ?

A. Fe metal

B. Fused quartz

C. Wurtzite

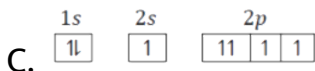
D. NiAs

Answer: B



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14. Which of the following will violates Aufbau principle as well as Pauli's exclusion principle ?



D. None of the above

Answer: C



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15. Hexachloroethane is also called

- A. Artificial sweetner
- B. Artificial camphor
- C. Artificial polymer
- D. None of these

Answer: B



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16. In a reaction RCHO is reduced to RCH_3 using amalgamated zinc and concentrated HCl and warming the solution. The reaction is known as

A. Meerwein - Ponnendorf reaction

B. Clemmensen's reduction

C. Wolff - Kishner reduction

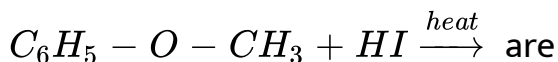
D. Schiff's reaction

Answer: B



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17. The products formed in the following reaction



A. $C_6H_5 - I$ and $CH_3 - OH$

B. $C_6H_5 - OH$ and $CH_3 - I$

C. $C_6H_5 - CH_3$ and HOL

D. C_6H_6 and CH_3Ol

Answer: B



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18. Terylene is a polymer obtained from

A. Ethylene glycol and glycerol

B. Ethylene glycol and glycerinaldehydes

C. Ethylene glycol and terphthalic acid

D. None of the above

Answer: C



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19. Aspirin is chemically :

- A. Methyl salicylate
- B. Ethyl salicylate
- C. Acetyl salicylic acid
- D. o - hydroxy benzoic acid

Answer: C



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20. The IUPAC name of $K_4[Fe(CN)_6]$ is

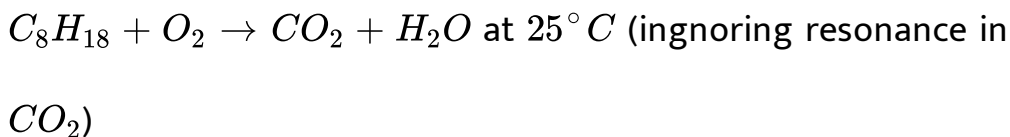
- A. Potassium hexacyanoiron (II)
- B. Potassium hexacyanoferrate (III)
- C. Potassium hexacyanoferrate (II)
- D. Tripotassium hexacyanoiron (II)

Answer: C



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21. For the combustion of n-octane



- A. $\Delta H = \Delta E - 5.5 \times 8.31 \times 0.298$ in kJ/mol
- B. $\Delta H = \Delta E + 4.5 \times 8.31 \times 0.298$ in kJ/mol
- C. $\Delta H = \Delta E - 4.5 \times 8.31 \times 298$ in kJ/mol

D. $\Delta H = \Delta E - 4.5 \times 8.31 \times 0.298$ in kJ/mol

Answer: D

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22. Which one is the electron deficient compound ?



Answer: D

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23. The IUPAC name of tertiary butyl chloride is

- A. Butan -1 - ol
- B. Butan -2 - ol
- C. 2 - methyl propan -1 - ol
- D. 2 - methyl propan -2 - ol

Answer: D



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24. Isomers which can be interconverted through rotation around a single bond are

- A. diastereomers
- B. conformers

C. enantiomers

D. positional isomers

Answer: B



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25. An aqueous solution contain either Hg_2^{2+} or Hg^{2+} the given solution given green ppt with KI solution . About the given aqueous solution which of the following is incorrect ?

A. It contain Hg_2^{2+}

B. It contain Hg^{2+}

C. with NH_3 solution it gives black precipitate

D. With $NaCl$ solution it gives white precipitate

Answer: B

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26. 100 ml of 5 m H_2SO_4 of density 1 gm/ml is mixed with 100 ml of 8 m H_2SO_4 of density 1.25 g/mL. If there is no change in volume of resulting solution due to mixing, the molarity of the resulting mixture is -

A. 5.5 M

B. 6.5 M

C. 7.5 M

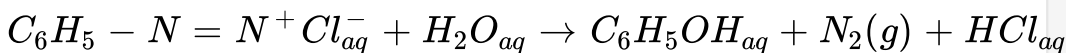
D. 5.26 M

Answer: C

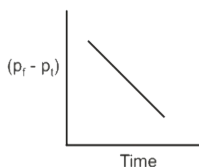
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27. Benene diaxonium chloride in aqueous solution decomposes

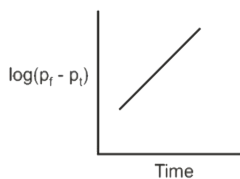
as _____ :



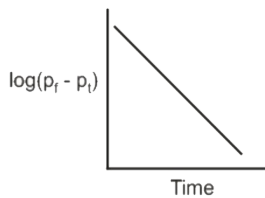
The reaction follows first order kinetics. If P_t is the pressure of N_2 at constant volume and temperature corresponding to different intervals of time t and p_f that after completion of the reaction, then which of the following graphs conforms to the kinetics of the reaction ?



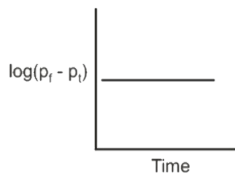
A.



B.



C.



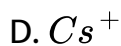
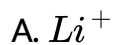
D.

Answer: C



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28. Which of the following has largest ionic size



Answer: D

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29. In NH_3 solution of Zn^{2+} , Zn^{2+} form $[Zn(NH_3)_4]^{+2}$ In this solution, to increase the concentration of Zn^{2+} we have to add -

A. H_2O

B. HCl

C. NH_3

D. Either H_2O or HCl

Answer: D

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30. The reaction of , water gas ($CO + H_2$) + H_2 at 673 K, 300 atmosphere in presence of the catalyst Cr_3O_3 / ZnO is used for the manufacture of

A. HCHO

B. CH_3COOH

C. HCOOH

D. CH_3OH

Answer: D



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31. Beckmann's thermometer measures :

A. High temperature

- B. Low temperature
- C. Normal temperature
- D. All temperature

Answer: B



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32. An element with atomic number 20 will be placed in which period of the periodic table

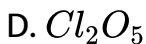
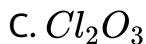
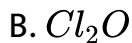
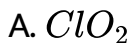
- A. 1
- B. 2
- C. 3
- D. 4

Answer: D



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33. When dry chlorine gas is passed through silver chlorate heated to $90^{\circ}C$, then which of the oxides of chlorine is obtained ?

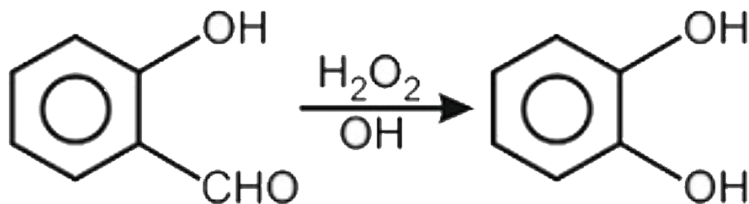


Answer: A



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34. The given reaction is an example of -



- A. Reimer - Thiemann reaction
- B. Liebermann's nitroso reaction
- C. Lederer manasse reaction
- D. Dakin reaction

Answer: D



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35. The number average molecular mass and mass average molecular mass of a polymer are respectively 30,000 and 40,000. The poly dispersity of the polymer is:

A. < 1

B. < 1

C. 1

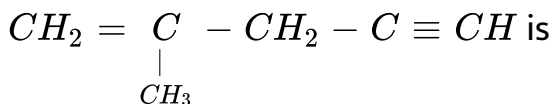
D. 0

Answer: B



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36. The IUPAC name of the compound,



- A. 2- Methylpent -1-en-4-yne
- B. 4- Methylpent -4-en-1-yne
- C. 2- Methylpent -2-en-4-yne
- D. 4- Methylpent -2-en-1-yne

Answer: A



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37. The dipole moment of H_2O_2 is more than that of H_2O but H_2O_2 is not a good solvent because :

- A. It has a very high dielectric constant so that ionic compounds cannot be dissolved in it
- B. It does not act as an oxidising agent

C. It acts as a reducing agent

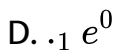
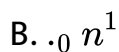
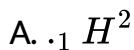
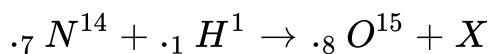
D. It dissociates easily and acts as an oxidising agent in chemical reactions.

Answer: D



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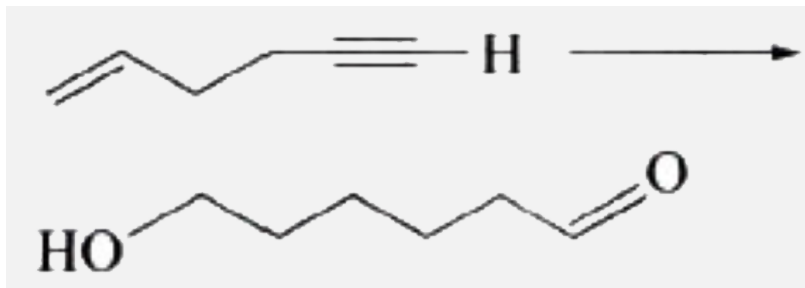
38. What is X in the nuclear reaction



Answer: C

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39. Select the best reagent (s) to accomplish the following transformation



- A. $O_3, Zn / AcOH$
- B. $BH_3, NaOH / H_2O_2$
- C. $Hg^{2+} / H_2SO_4 / H_2O$
- D. $KMnO_4 / H^+$

Answer: B



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40. The maximum possible number of hydrogen bonds a water molecule can form is

A. 2

B. 4

C. 3

D. 1

Answer: B



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41. The equilibrium constant K for the reaction $2HI(g) \rightleftharpoons H_2(g) + I_2(g)$ at room temperature is 2.85 and that at $698K$ is 1.4×10^{-2} . This implies

- A. Exothermic
- B. Endothermic
- C. Exergonic
- D. Unpredictable

Answer: A



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42. Which of the following pairs of compounds are position isomers?

- A. Isobutyl alcohol and s - butyl alcohol
- B. Isobutyl alcohol and t - butyl alcohol
- C. Isopentyl alcohol and neopentyl alcohol
- D. Ethyl alcohol and ethylene glycol

Answer: B



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43. For the reaction $N_{2(g)} + O_{2(g)} \rightleftharpoons 2NO_{(g)}$, the value of K_c at $800^\circ C$ is 0.1. When the equilibrium concentrations of both the reactants is 0.5 mol, what is the value of K_p at the same temperature

- A. 0.5
- B. 0.1

C. 0.01

D. 0.025

Answer: B



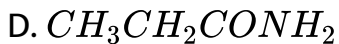
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44. An organic compound having molecular mass 60 is found to contain $C = 20\%$, $H = 6.67\%$, and $N = 46.67\%$, while rest is oxygen. On heating, it gives NH_3 along with a solid residue. The solid residue gives violet color with alkaline copper sulphate solution. The compound is

A. CH_3NCO

B. CH_3CONH_2

C. $(NH_2)_2CO$



Answer: C



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45. Which of the following combination will produce H_2 gas ?

A. Zn metal and NaOH (aq)

B. Au metal and NaCN (aq) in the presence of air

C. Cu metal and conc. HNO_3

D. Fe metal and conc. HNO_3

Answer: A



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