



## CHEMISTRY

### BOOKS - NTA MOCK TESTS

#### NTA NEET SET 56

#### Chemistry

1. Lattice energy of an ionic compound depends upon :

- A. Size of the ion only
- B. Charge on the ion only
- C. Packing of ions only

D. Charge on the ion and size of the ion

**Answer: D**



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2. The wavelength of the radiation emitted , when in a hydrogen atom electron falls from infinity to stationary state 1 , would be :

(Rydberg constant =  $1.097 \times 10^7 m^{-1}$ )

A. 91 nm

B. 192 nm

C. 406 nm

D.  $9.1 \times 10^{-8} nm$

**Answer: A**

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3. If isobutane and n-butane are present in a gas, then how much oxygen should be required for complete combustion of 5 kg of this gas

- A. 1.8 kg
- B. 9 kg
- C. 17.9 kg
- D. 27 kg

**Answer: C**

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4. Which colour precipitate is obtained by reaction of phosphate radical with ammonium molybdate

A. Green

B. Pink

C. Canary yellow

D. Violet

**Answer: C**

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5. The change in bond angle as the s - character of hybridized orbital decreases is ,

- A. Decreases
- B. Increases
- C. Does not change
- D. Become zero

**Answer: A**



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6. What may be expected to happen when phosphine gas is mixed with chlorine gas ?

A. The mixture only cools down

B.  $PCl_3$  and  $HCl$  are formed and the mixture warms up

C.  $PCl_5$  and  $HCl$  are formed and the mixture cools down

D.  $PH_3$ ,  $Cl_2$  is formed with warming up

**Answer: C**



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7. The vapour pressure of pure liquid A is 0.80 atm. On mixing a non-volatile B to A, its vapour pressure becomes 0.6 atm. The mole fraction of B in the solution is:

A. 0.25

B. 1

C. 0.5

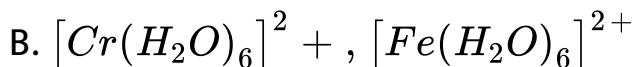
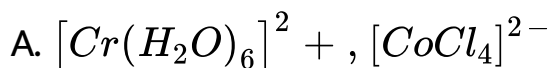
D. 0.75

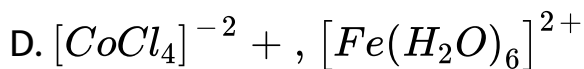
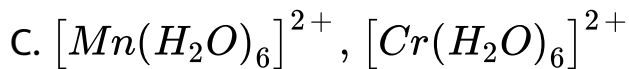
**Answer: A**



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**8.** The pair in which both species have same magnetic moment (spin only value) is .

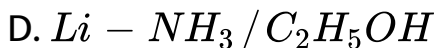
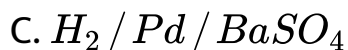
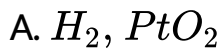




**Answer: B**

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9. Which of the following reagent is used for the conversion of 2 - hexyne into trans 2- hexene



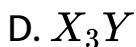
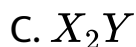
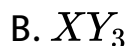
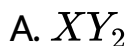


**Answer: D**



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**10.** In a cubic structure of compound which is made from X and Y, where X atoms are at the corners of the cube and Y at the face centers of the cube. The molecular formula of compound is:



**Answer: B**

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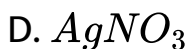
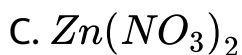
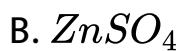
11. In an organic compound , the presence of halogen is detected by

- A. Iodoform test
- B. silver nitrate test
- C. Beilstein's test
- D. Millons' test

**Answer: C**

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12. A strip of copper is dipped into a colourless solution of the following four salts , which are placed separately in four different test tubes. Which solution will turn Blue ?



**Answer: D**



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13. which alkene does not follow Anti-Markownikoff's addition rule

A. 2 - butene

B. 1 - butene

C. 2 - pentene

D. 2 - hexene

**Answer: A**



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14. The Vander Waal's constant 'a' for the gases  $O_2$ ,  $N_2$ ,  $NH_3$  and  $CH_4$  are 1.3, 1.390, 4.170 and

$2.253 \text{ l}^2 \text{ atm mol}^{-2}$  respectively. The gas which can be most easily liquefied is



**Answer: C**



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15. Which offensive smelling compound is obtained when ethyl amine is heated with chloroform and alcoholic KOH,

- A. A cyanide
- B. An isocyanide
- C. A secondary amine
- D. An acid

**Answer: B**



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**16.** Which of the following statements about the zeolites is false?

- A. They are used as cation exchangers

B. Some of the  $SiO_4^4$  units are replaced by

$AlO_4^{-5}$  and  $AlO_6^{9-}$  ions in zeolites

C. Zeolites are aluminosilicates having three - dimensional network

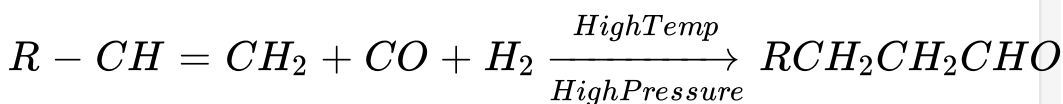
D. They have open structure which enables them to take up small molecules

**Answer: B**



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17.



A. Mendius reaction

B. Oxo process

C. Sandorn's reaction

D. Stephen's reaction

**Answer: B**



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18.  ${}_{89}\text{Ac}^{231}$  after emission of some  $\alpha$  and  $\beta$  particles gives  ${}_{82}\text{Pb}^{207}$ . The number of such  $\alpha$  and  $\beta$  - particles are respectively

A. 5,7



B. 6,5

C. 7,5

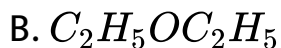
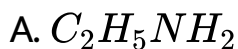
D. 5,6

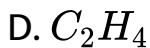
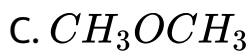
**Answer: B**



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19. The compound formed when ethyl alcohol ( $C_2H_5OH$ ) is mixed with ammonia and passed over heated alumina is





**Answer: A**



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20. Types of isomerism shown by  $[Cr(NH_3)_5NO_2]Cl_2$  is

A. Co - ordination

B. Geometrical

C. Optical

D. Linkage

**Answer: D**



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21. Suppose the reaction  $PCl_5(s) \rightleftharpoons PCl_3(s) + Cl_2(g)$  is in a closed vessel at equilibrium stage. What is the effect on equilibrium concentration of  $Cl_2(g)$  by adding  $PCl_5$  at constant temperature ?

A. Unaffected

B. Increases

C. Decreases

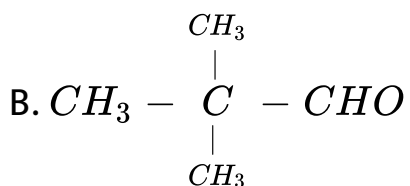
D. Cannot be described without the value of  $K_p$

**Answer: B**

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22. Which of the following compound does undergo aldol condensation

A.  $\text{HCHO}$



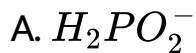
C.  $\text{CCl}_3 \text{CHO}$

D.  $\text{CH}_3 \cdot \text{CH}_2 \cdot \text{CHO}$

**Answer: D**

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23. Which one of the following species acts as both Bronsted acid and base ?



D. All of these

**Answer: C**



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24. Glacial acetic acid be

A. Chemically separating acetic acid

B. Crystallizing separating and melting acetic acid

C. Distilling vinegar

D. Treating vinegar with dehydrating agent

**Answer: B**



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**25.** The reason why beryllium differs from rest of the members of its family (Group - by)

A. Large size and largest ionic radius

B. Small size and lower electronegativity

C. Large size and lower ionisation energy

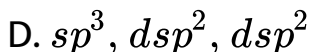
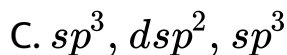
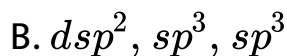
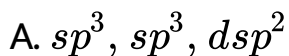
D. Small size and higher electronegativity

Answer: D



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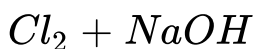
26. Among  $[Ni(CO)_4]$ ,  $[Ni(CN)_4]^{2-}$ ,  $[NiCl_4]^{2-}$  species, the hybridization states at the  $Ni$  atom are, respectively (At. no. of  $Ni = 28$ )



**Answer: C**

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27. Which compound can produce chloropicrin with



A. Nitromethane

B. Nitrophenol

C. Nitroethane

D. Nitrostyrene

**Answer: A**

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28. In  $P_4O_{10}$ , the number of oxygen atoms bonded to each phosphorus atom is \_\_\_\_\_ .

A. 2

B. 2.5

C. 3

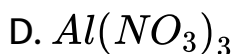
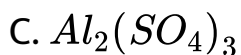
D. 4

**Answer: D**



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29. Which compound has the same value of Van't Hoff factor  $i$  as that of  $K_4[Fe(CN)_6]$



**Answer: C**



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30. According to Hess's law, the heat of reaction depends upon

- A. Intermediate path of the reaction
- B. Initial and final conditions of reactants
- C. End conditions of reactants
- D. Initial condition of reactants

**Answer: B**



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**31.** Natural rubber is an example of which type of Polymer ?

- A. Addition polymer
- B. Elastomer

C. Condensation polymer

D. None of these

**Answer: B**



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**32.** The example of amorphous solid is

A. Cesium chloride

B. Glass

C. Mohr Salt

D. Calcium fluoride

**Answer: C**



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33. The rate law of the reaction  $2N_2O_5 \rightarrow 4NO_2 + O_2$  is

A. Rate =  $K[NO_2]^4[O_2]$

B. Rate =  $K[N_2O_5]^2$

C. Rate =  $K[N_2O_5]^0$

D. Rate =  $K[N_2O_5]$

Answer: D



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34. The relation between glucose and mannose is

- A. Anomers
- B. Disaccharides
- C. Epimers
- D. Ketohexoses

**Answer: C**



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**35. Which of the following is not a mineral of aluminum**

- A. Corundum
- B. Anhydrite
- C. Diaspore

D. Bauxite

**Answer: B**



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36. The reactions that occurs at the cathode of a common dry cell is



**Answer: C**



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37. An ionizing solvent has

- A. A dielectric constant equal to 1
- B. High value of dielectric constant
- C. Low value of dielectric constant
- D. Has a high melting point

Answer: B



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38. Chloramine-*T* is a:



A. Disinfectant

B. Antipyretic

C. Analgesic

D. Antiseptic

**Answer: B**



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**39.** An element has electronic configuration

$1s^2 2s^2 2p^6 3s^2 3p^4$ . Predict its group, period and block

A. Period = 3<sup>rd</sup>, block = p, group = 16

B. Period = 3<sup>rd</sup>, block = p, group = 10

C. Period = 4<sup>th</sup>, block = d, group = 12

D. Period = 5<sup>th</sup>, block = s, group = 1

**Answer: A**

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**40.** The correct variation for adsorption of a gases on a solid surface with pressure of the gas, in the following manner is

A. Slow  $\rightarrow$  fast  $\rightarrow$  independent of the pressure

B. Fast  $\rightarrow$  slow  $\rightarrow$  independent of the pressure

C. Independent of the pressure  $\rightarrow$  fast  $\rightarrow$  slow

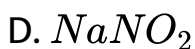
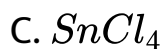
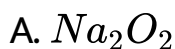
D. Independent of the pressure → slow → fast

**Answer: B**



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41. Which is an oxidising as well as a reducing agent in the following?



**Answer: D**

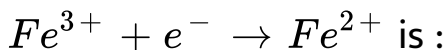


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42. Given, standard electrode potentials,



The standard electrode potential  $E^{\circ}$  for



A.  $+0.772V$

B.  $-0.404V$

C.  $+0.404V$

D.  $-0.476V$

**Answer: A**



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**43.** The rate of a chemical reaction increases by catalyst due

- A. Reacting with reactants
- B. Increasing the activation energy
- C. Decreasing the activation energy
- D. Reacting with products

**Answer: C**



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**44.** Which of the following is intensive property

A. Enthalpy

B. Volume

C. Mass

D. Surface tension

**Answer: D**



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**45.** For solution of weak electrolytic, the degree of ionization

A. Will be reciprocal to the dilution

B. Will be proportional to dilution

C. Will be proportional to the square root of dilution

D. Will be proportional to concentration of electrolyte

**Answer: C**



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