



## CHEMISTRY

### BOOKS - NTA MOCK TESTS

#### NTA NEET SET 53

#### Chemistry

1. The electronic configuration of an element is  $1s^2 2s^2 2p^6 3s^2 3p^3$ . The atomic number of the element which is just below the above element in the periodic table is

A. 34

B. 49

C. 33

D. 31

**Answer: C**



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2. In a mono - keto compound , generally which form of tautomeric structure is more stable than other ?

A. Keto form is more stable

B. Enol form is more stable

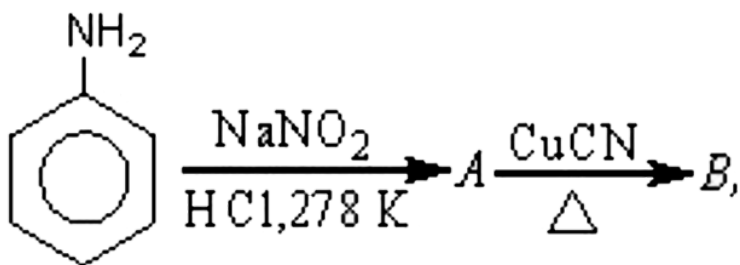
C. Equally stable

D. Stability cannot be predicted

Answer: A

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3. In the chemical reactions,



Compounds A and B respectively are

- A. Fluorobenzene and phenol
- B. Benzene diazonium chloride and benzonitrile
- C. Nitrobenzene and chlorobenzene
- D. Phenol and bromobenzene

**Answer: B**



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4. Vanishing cream is an example of

A. Solution

B. Foam

C. Lyophilic solution

D. Emulsion

**Answer: D**



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5. Hydrolysis of sucrose gives



Equilibrium constant  $K_c$  for the reaction is  $2 \times 10^{13}$  at  $300\text{K}$ . Calculate  $\Delta G^\ominus$  at  $300\text{K}$ .

- A. Two molecules of glucose
- B. Two molecules of fructose
- C. One molecule each of glucose and fructose
- D. One molecule each of glucose and mannose

**Answer: C**



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6. The nature of 2, 4, 6 - trinitrophenol is

A. Neutral

B. Basic

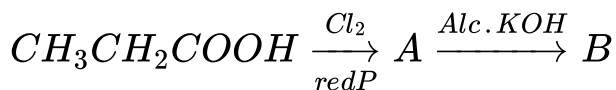
C. Acidic

D. Weakly basic

**Answer: C**

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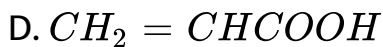
7. The compound B is :



A.  $CH_3CH_2COCl$

B.  $CH_3CH_2CHO$

C.  $ClCH_2CH_2COOH$

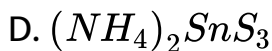


**Answer: D**



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8. A precipitate of the following would be obtained when  $HCl$  is added to a solution of stannous sulphide ( $SnS$ ) in yellow ammonium sulphide



**Answer: B**



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9. Which of the following is not a biopolymer?

A. Cellulose

B. Nylon - 6

C. Insulin

D. DNA

**Answer: B**



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10. For an exothermic reaction , temperature increase by  $10^{\circ}C$  , the equilibrium constant will



A. 2 times

B. Same

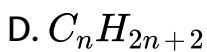
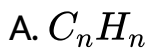
C. 1/2 times

D. 4 times

**Answer: C**

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**11.** The general formula of a cycloalkane is



**Answer: B**



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12. If the ionic product of  $\text{Ni}(\text{OH})_2$  is  $1.9 \times 10^{-15}$ , the molar solubility of  $\text{Ni}(\text{OH})_2$  in 1.0 M NaOH is

A.  $1.9 \times 10^{-18} M$

B.  $1.9 \times 10^{-13} M$

C.  $1.9 \times 10^{-15} M$

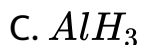
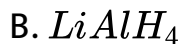
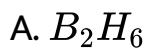
D.  $1.9 \times 10^{-14} M$

**Answer: C**



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13. Which is a Lewis base ?



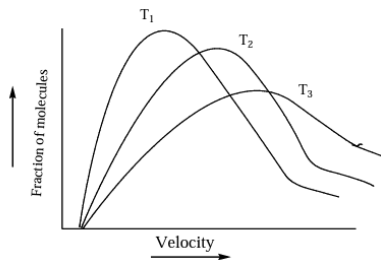
**Answer: D**



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14. In the following graph of Maxwell - Boltzmann distribution of molecular velocities . Which of the following

is the correct order of temperature ?



A.  $T_1 < T_2 < T_3$

B.  $T_3 < T_2 < T_1$

C.  $T_2 < T_1 < T_3$

D. None of these

**Answer: A**



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15. Molecular formula  $C_3H_9N$  represents :

A.  $1^\circ$  amine

B.  $2^\circ$  amine

C.  $3^\circ$  amine

D. Quaternary salt

**Answer: D**



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**16.** Which of the following is its mineral for tin

A. Galena

B. Cerussite

C. Cassiterite

D. Anglesite

**Answer: C**



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17. A reaction  $A + B \rightarrow C + D + q$  is found to have a positive entropy change, the reaction will be:

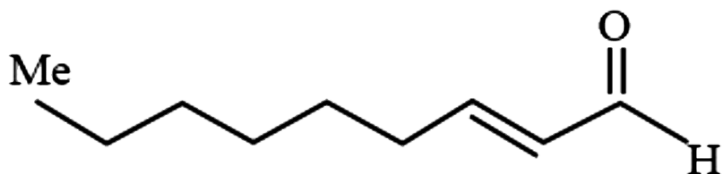
- A. Possible at high temperature .
- B. Possible only at low temperature.
- C. Not possible at any temperature .
- D. Possible at any temperature.

**Answer: D**



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18. What is the IUPAC of the following compounds ?



A. Non - 2 - en - 1 al (cockroach repellent found in cucumber)

B. Non - 3 - en - 1 al (cockroach repellent found in cucumber)

C. Non - 4 - en - 2 al (cockroach repellent found in cucumber)

D. Non - 4 - en - 3 al (cockroach repellent found in cucumber)

**Answer: A**



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**19.** Non-stoichiometric cuprous oxide.  $Cu_2O$  can be prepared in laboratory. In this oxide, copper-to-oxygen ratio is slightly less than 2 : 1. can you account for the fact that this substance is a p-type semiconductors?

- A. P- type semiconductor
- B. n-type semiconductor
- C. Intrinsic semiconductor
- D. Insufficient information

**Answer: A**



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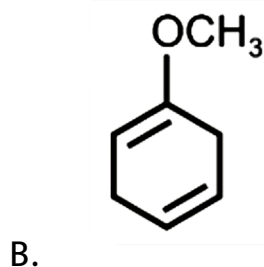
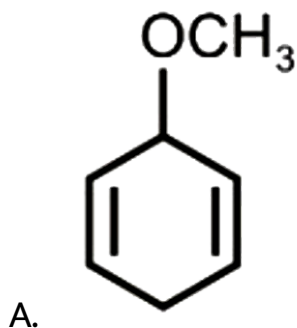
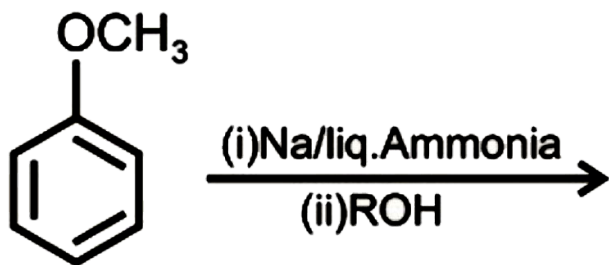
20. Marble acts as a sink for

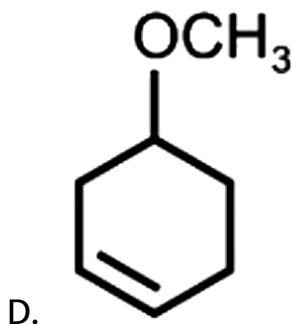
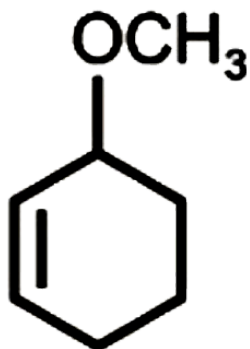
- A. Metallic pollutants
- B.  $NH_3$  pollutants
- C. Acidic pollutants
- D. None of these

**Answer: C**

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21. In the reaction , the product P is





Answer: B

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22. How many electrons are present in 3d - orbital of tetrahedral  $K_2[NiCl_4]$  complex ?

A. 10 electrons

B. 8 electrons

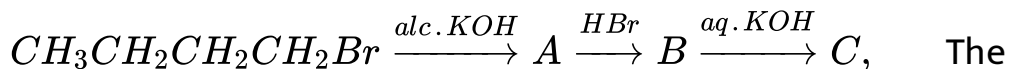
C. 6 electrons

D. 7 electrons

**Answer: B**

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23. In the following sequence of reaction ,



product 'c' is ?

A. Butan - 2 - ol

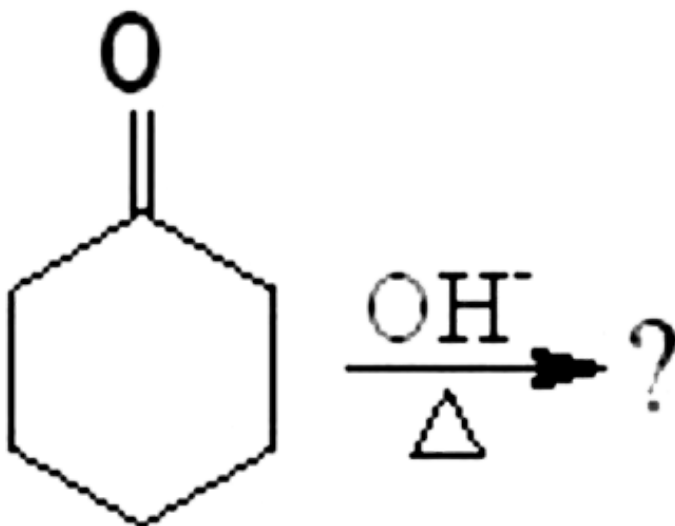
B. Butan - 1 - ol

C. Butyne

D. Butene

Answer: A

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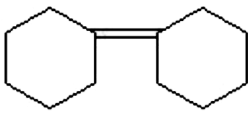


24.

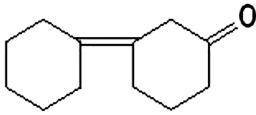
product

is

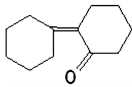
A.



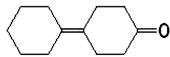
B.



C.



D.



**Answer: C**



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25. Which one of the following characteristics of the transition metals is associated with their catalytic activity?

A. High enthalpy of atomization

- B. Paramagnetic behaviour
- C. Colour of hydrated
- D. Variable oxidation states

**Answer: D**

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**26.** Which of the following halogen cannot form more than one oxoacids ?

- A. Bromine
- B. Iodine
- C. Fluorine
- D. Chlorine

**Answer: C**



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**27.** Which of the following explanations accounts for o-nitrophenol to be more volatile than p-nitrophenol?

- A. intermolecular H - bonding in o - nitrophenol and intermolecular H - bonding in p - nitrophenol
- B. intermolecular H - bonding in o - nitrophenol and intermolecular H - bonding in p - nitrophenol
- C. more stronger intermolecular H - bonding in o - nitrophenol as compared to p nitrophenol



D. more stronger intermolecular H - bonding in - o - nitrophenol as compared to p - nitrophenol

**Answer: A**

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**28.** Penicillin was discovered by

- A. Fleming
- B. Tence and salke
- C. S.A waksna
- D. Lewis Pasteur

**Answer: A**

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29. Propyne and propene can be distinguished by :

A. Concentrated  $H_2SO_4$

B.  $Br_2$  in  $CCl_4$

C. Dilute  $KMnO_4$

D. ammonical  $AgNO_3$

**Answer: D**

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30. 20.8g of  $BaCl_2$  on reaction with 9.8g of  $H_2SO_4$  produces 7.3 g of HCl and some amount of  $BaSO_4$  The

amount of  $BaSO_4$  formed is

A. 23.3 g

B. 20.8 g

C. 9.8 g

D. 10.4 g

**Answer: A**



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**31.** The volume of  $0.1N$  dibasic acid sufficient to neutralize 1g of a base that furnishes 0.04 mole of  $OH^-$  in aqueous solution is :

A. 400 mL

B. 600 mL

C. 200 mL

D. 800 mL

**Answer: C**



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**32.** The relationship between energy ( $E$ ) of wavelength  $2000A^0$  and  $8000A^0$ , respectively is

A.  $E_1 = 4E_2$

B.  $E_1 = 2E_2$

C.  $E_1 = \frac{E_2}{2}$

D.  $E_1 = \frac{E_2}{4}$

**Answer: A**



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**33.** A silver cup is plated with silver by passing 965 C of electricity. The amount of Ag deposited is

A. 107 . 89 g

B. 9.89 g

C. 1.0002 g

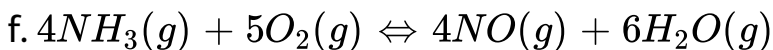
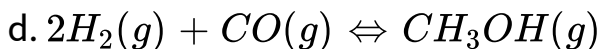
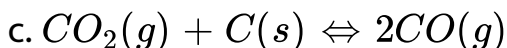
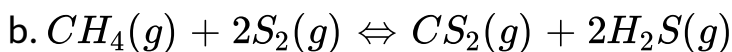
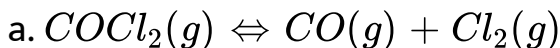
D. 1.08 g

**Answer: D**



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**34.** Which of the following reactions will get affected by increasing the pressure? Also, mention whether change will cause the reaction the reaction to go into forward of backward direction.



A. (b) (n) (b) (f) (b)(b)

B. (b) (n) (b) (b) (b) (b)

C. (f) (f) (b) (f) (b) (b)

D. None of these

**Answer: A**



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**35.** EAN of Cr in  $[Cr(NH_3)_6]Cl_3$  is

A. 32

B. 33

C. 34

D. 35

**Answer: B**



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**36.** Propyne and propene can be distinguished by :

- A. Reducing agent
- B. Oxidizing agent
- C. Dehydrating agent
- D. Bleaching agent

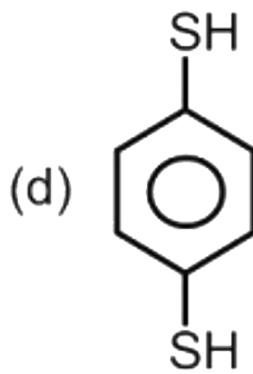
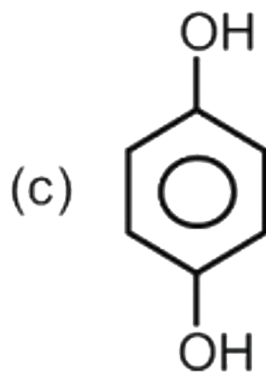
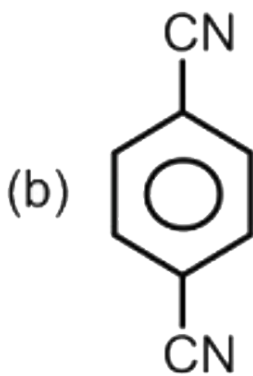
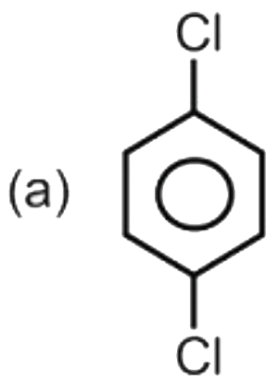
**Answer: C**



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37. For which of the following molecule significant  $\mu \neq 0$  ?



A. Only (a)

B. (a) and (b)

C. Only (c)

D. (c) and (d)

**Answer: D**



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**38.** When non-ideal solution was prepared by mixing 30 mL chloroform and 50 mL acetone. The volume of mixture will be

A.  $> 80mL$

B.  $< 80mL$

C.  $= 80mL$

D.  $\geq 80mL$

**Answer: B**



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39. Solid  $N_2O_5$  is

- A. Ionic
- B. covalent
- C. Coordinate covalent
- D. Metallic

**Answer: A**



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40. Consider an ion with the following structure :

$[H_2C = C = NH_2]^+$  For this ion , we can define two

planes : one plane containing H-C-H group , the other plane containing H-C-H group , what is the relationship between these planes ?

- A. They are at  $120^{\circ}$
- B. They are perpendicular to each other
- C. They are in the same plane
- D. More information is required

**Answer: B**

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**41.** Give the units of the rate constant for second order reaction.

A.  $\text{time}^{-1}$

B.  $\text{mol L}^{-1}\text{time}^{-1}$

C.  $\text{L mol}^{-1}\text{time}^{-1}$

D.  $\text{L}^2\text{mol}^{-2}\text{time}^{-1}$

**Answer: D**

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**42.** Gold number of a lyophilic sol is such a property that

A. The larger its value , the greater is the peptizing power.

B. The lower its value , the greater is the peptizing power.

C. The lower its value , the greater is the protecting power.

D. The larger its value , the greater is the protecting power.

**Answer: C**

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**43.** For a given reaction,  $\Delta H = 35.5 \text{ KJmol}^{-1}$  and  $\Delta S = 83.6 \text{ JK}^{-1}\text{mol}^{-1}$ . The reaction is spontaneous at:  
(Assume that  $\Delta H$  and  $\delta S$  so not vary with temperature)

A.  $T < 425\text{K}$

B.  $T < 425\text{K}$

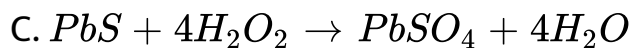
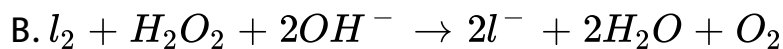
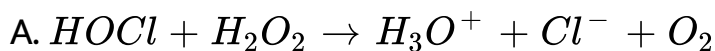
C. All temperatures

D.  $T > 298K$

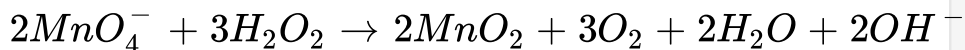
**Answer: B**

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**44.** In which of the following reactions, hydrogen peroxide acts as an oxidizing agent ?



D.



**Answer: C**



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**45.** Among  $NO_2^+$ ,  $KO_2$  and  $Na_2O_2$  and  $NaAlO_2$  the paramagnetism exist in -

- A.  $Na_2O_2$  only
- B.  $KO_2$  and  $NO_2^+$
- C.  $Na_2O_2$  and  $NaAlO_2$
- D.  $KO_2$  only

**Answer: D**



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