

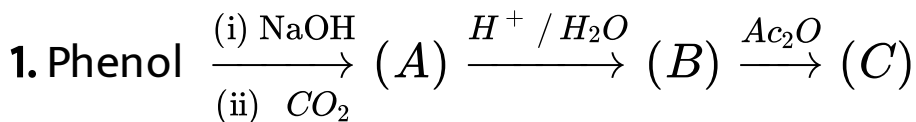


# CHEMISTRY

## BOOKS - NTA MOCK TESTS

### NEET MOCK TEST 15

#### Chemistry



In this reaction , identify the incorrect statement?

A. A is formed through Kolbe reaction

B. B is salicylic acid

C. C is o - acetoxybenzoic acid

D. C is a paracetamol

**Answer: D**



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**2. A ambidentate ligand is one which -**

A. is linked to the metal atom at two points

B. has two donor atoms at two points

C. has two donor atoms but either of the two can form a co - ordinate bond

D. forms chelate rings

**Answer: C**



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**3.** A gas undergoes change from state A to state B. In this process, the heat absorbed and work done by the gas is 5 J and 8 J, respectively. Now

gas is brought back to A by another process during which 3 J of heat is evolved. In this reverse process of B to A:

A. 6 J of the work will be done by the gas

B. 6 J of the work will be done by the surrounding on gas

C. 10 J of the work will be done by the surrounding on gas

D. 10 J of the work will be done by the gas

**Answer: B**





4. If the nitrogen atom has electronic configuration  $1s^7$ , it would have energy lower than that of the normal ground state configuration  $1s^2 2s^2 2p^3$  because the electrons would be closer to the nucleus. Yet  $1s^7$  is not observed because it violates

- A. Heisenberg's uncertainty principle
- B. Hund's rule
- C. Pauli exclusion principle

## D. Bohr postulate of stationary orbits

**Answer: C**



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5. What is maximum pH required to prevent the precipitation of ZnS in a solution that is 0.01 M  $ZnCl_2$  and saturated with 0.10M  $H_2S$ ?

[Given :  $K_{sp}(ZnS) = 10^{-21}$ ,

$K_{a1} \times K_{a2}$  (of  $H_2S$ ) =  $10^{-20}$ ]

A. 0

B. 1

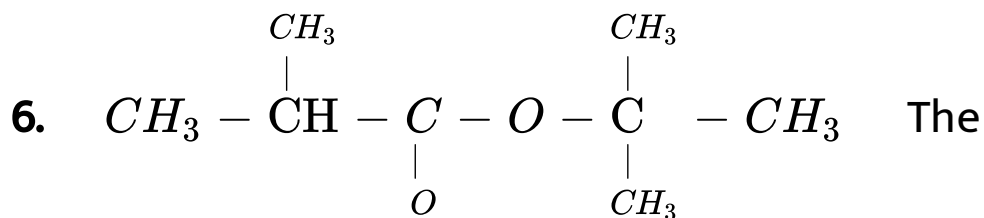
C. 2

D. 4

**Answer: B**



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common name of given ester is -

A. neo butyl iso butyrate

B. t - butyl n - butyrate

C. t - butyl iso butyrate

D. iso butyl iso butyrate

**Answer: C**



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7. At 3000 K the equilibrium pressures of  $CO_2$ ,  $CO$  and  $O_2$  are 0.6, 0.4 and 0.2 atmospheres respectively.  $K_p$  for the reaction,  $2CO_2 \rightleftharpoons 2CO + O_2$  is



A. 0.088

B. 0.0533

C. 0.133

D. 0.177

**Answer: A**



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**8.** Using electrolytic method, the cost of production of 5L of oxygen at STP, is Rs X, the

cost of production of same volume of hydrogen  
at STP, will be

A.  $2C$

B.  $\frac{X}{2}$

C.  $8X$

D.  $\frac{X}{8}$

**Answer: B**



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9. The maximum percentage of available volume that can be filled in a face centred cubic system by an atom is

A. 74 %

B. 68 %

C. 34 %

D. 26 %

**Answer: A**



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10. A certain current liberated 0.504 g of hydrogen in 2 hours. How many gram of copper can be liberated by the same current flowing for the same time in  $CuSO_4$  solution ?

A. 12.9 g

B. 15.9 g

C. 31.7 g

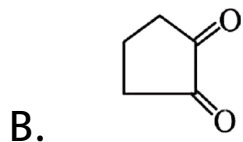
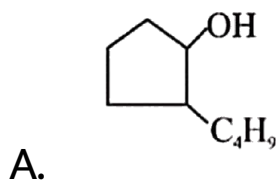
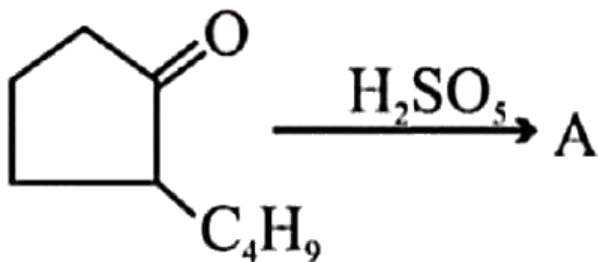
D. 36.9 g

**Answer: B**

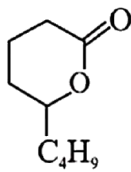


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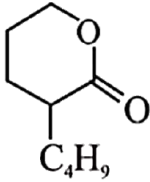
11. Identify the product A in the following reaction :



C.



D.



**Answer: C**



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**12.** The role of fluorspar during the electrolysis of molten alumina is

(i) To reduce the melting point

(ii) To increase conductivity

(iii) As a seeding agent

A. All are correct

B. Only (i) is correct

C. (i), (ii) are correct

D. (i), (iii) are correct

**Answer: C**



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13. The reaction,  $2SO_{2(g)} + O_{2(g)} \rightleftharpoons 2SO_{3(g)}$

is carried out in a  $1 \text{ dm}^3$  and  $2 \text{ dm}^3$  vessel separately. The ratio of the reaction velocity will be

A. 1 : 8

B. 1 : 4

C. 4 : 1

D. 8 : 1

**Answer: D**



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14. Fluorine has lower electron affinity than chlorine because of

A. bigger radius of fluorine, less electron density

B. smaller radius of fluorine, high electron density

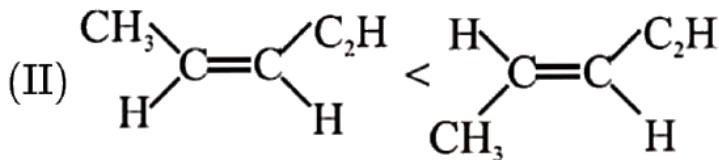
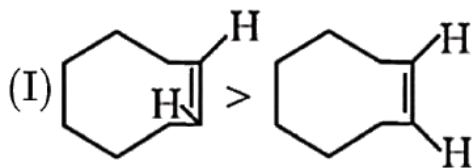
C. smaller radius of chlorine, high electron density

D. smaller radius of chlorine, less electron density

**Answer: B**

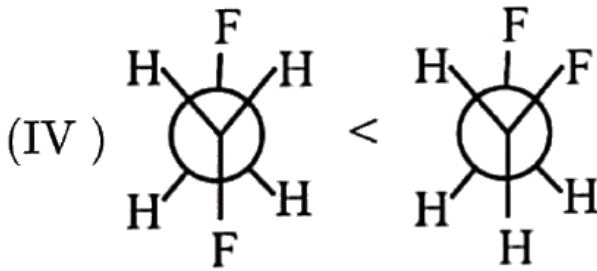
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15. What is incorrect order of stability?



(III) Boat form of 1, 4- cyclohexandiol >

# Chair form of 1,4 - cyclohexandiol



(V) Gauche form of succinic acid > Antic form of succinic acid

A. I, II, V

B. I, III, IV

C. I, IV

D. I

**Answer: D**



16. Match the following :

	List-I (Ion)		List-II (Shapes)
(p)	Cassiterite	(1)	$\text{FeCO}_3$
(q)	Rutile	(2)	$2\text{Fe}_2\text{O}_3$ $\cdot 3\text{H}_2\text{O}$
(r)	Cerussite	(3)	$\text{SnO}_2$
(s)	Siderite	(4)	$2\text{CuCO}_3$ $\cdot \text{Cu}(\text{OH})_2$
(t)	Limonite	(5)	$\text{PbCO}_3$
		(6)	$\text{TiO}_2$

A. (p) - 6, (q) - 3, (r) - 5, (s) - 4, (t) - 2

B. (p) - 1, (dq) - 3, (r) - 4, (s) - 2, (t) - 6

C. (p) - 3, (q) - 6, (r) - 5, (s) - 1, (t) - 2

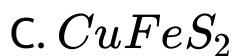
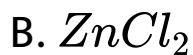
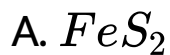
D. (p) - 3, (q) - 6, (r) - 4, (s) -1, (t) - 5

**Answer: C**



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**17. Fool's gold is**



**Answer: A**



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**18.** Which of the following statements is invalid-

A. the more stable the carbocation the faster it is formed

B. propyl cation changes to more stable isopropyl carbocation by 1,2 shift of a hydrogen

C. isopropyl chloride reacts with sodium ethoxide to form 1-ethoxypropane

D. propyl halides reacts with sodium ethoxide to form 1-ethoxypropane

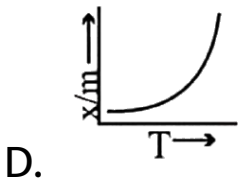
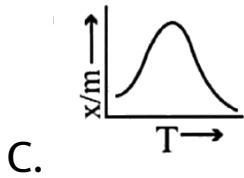
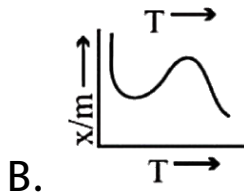
**Answer: C**



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**19.** Which of the following graph represents the variation of amount of chemisorption of a gas

by a solid with temperature under constant pressure?

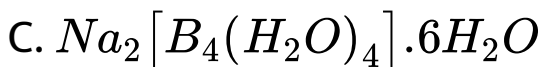
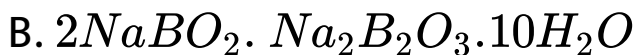
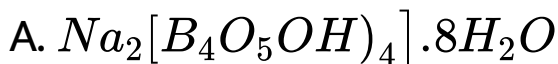


**Answer: C**



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20.  $Na_2B_4O_7 \cdot 10H_2O$  is correctly represented as

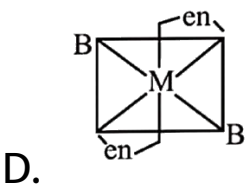
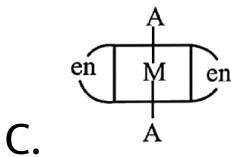
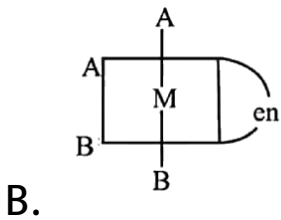
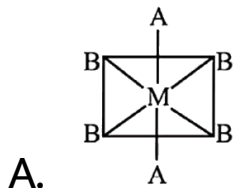


D. All of the above

**Answer: A**

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21. The phenomenon of optical activity will be shown by:



**Answer: B**



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**22.** The cylinder contains 100 gm of an ideal gas (mol. wt. = 40 gm/mol) at  $27(^{\circ})C$  and 2 atm. pressure. In transportation the cylinder fell and a dent was created. The valve present cannot keep the pressure greater than 2 atm. Hence 10 gm of a gas got leaked out. The volume of the container before and after dent is-

A. 30.8 L , 27.7 L

B. 27.7 L, 30.8 L

C. 30.8 L , 30.8L

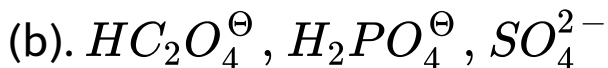
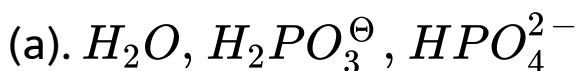
D. 27.7 L, 27.7 L

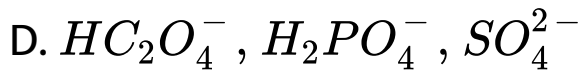
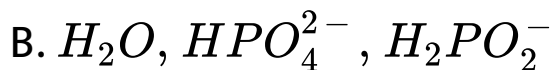
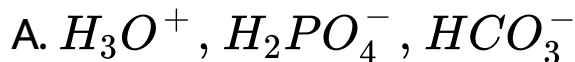
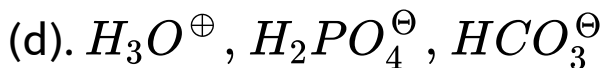
**Answer: A**



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**23.** Which of the following constitute a set of amphoteric species?



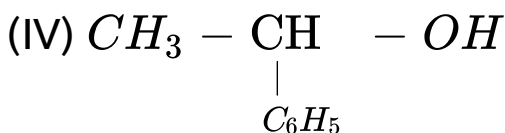
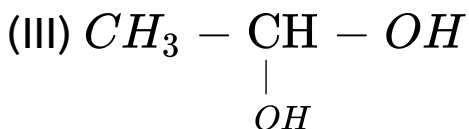
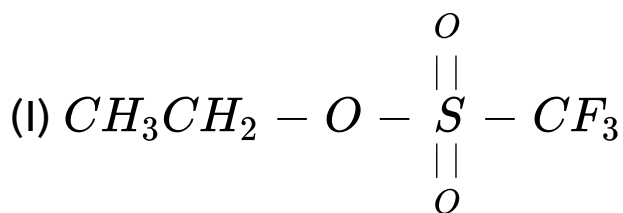


**Answer: C**



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24. Arrange decreasing order of reactivity of these compounds for nucleophilic substitution reaction



A. III > IV > I > II

B. III > IV > I > II

C. I > II > III > IV

D. I > II > IV > III

**Answer: D**



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**25.** Ordinary hydrogen at high temperature is a mixture of :

A.

75 % o - Hydrogen + 25 % p - Hydrogen

B.

25 % o - Hydrogen + 75 % p - Hydrogen

C.

50 % o - Hydrogen + 50 % p - Hydrogen

D.

1 % o - Hydrogen + 99 % p - Hydrogen

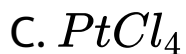
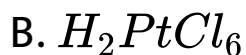
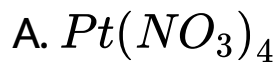
**Answer: A**



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26. Aqua regia reacts with Pt to yield:



**Answer: B**



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27.  $H_2S$  gas can be obtained by the action of water on:

A.  $CuS$

B.  $FeS$

C. Flower of sulphur

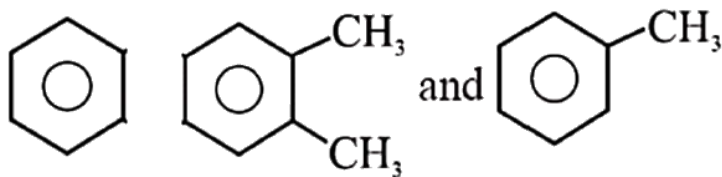
D.  $Al_2S_3$

**Answer: D**



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28. Number of secondary carbon atoms present in the compounds is respectively :



A. 6, 4, 5

B. 4, 6, 5

C. 5, 4, 6

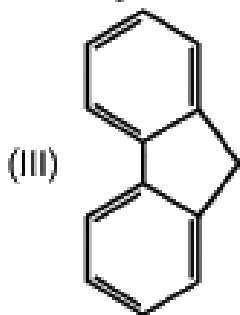
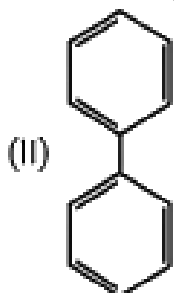
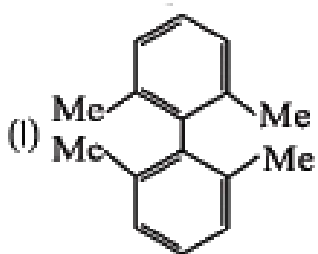
D. 6, 2, 1

**Answer: A**



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29. Given all the three compounds. Arrange them in decreasing order of reactivity towards electrophile.



A. I > II > III

B. II > I > III

C. III > II > I

D. II > III > I

**Answer: C**



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**30.** Arrange priority of CIP sequence of given groups in decreasing order -

(I) *OH*

(II)  $COOH$

(III)  $CHOHCH_3$

(IV)  $CH_2OH$

A. I gt II gt III gt IV

B. IV gt III gt II gt I

C. II gt III gt IV gt I

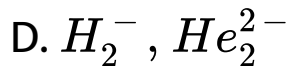
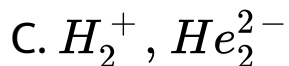
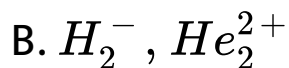
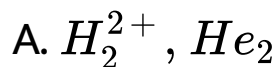
D. IV gt I gt II gt III

**Answer: A**



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31. In which of the following pairs of molecules/ions, both the species are not likely to exist?

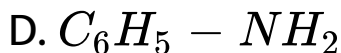
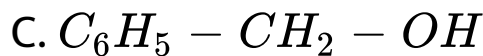
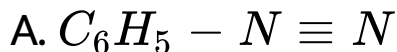


**Answer: A**



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32. What is the product when  $C_6H_5CH_2NH_2$  reacts with  $HNO_3$ ?



**Answer: C**



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**33.** Which of the following statements is /are not true?

A. Density of solid gets increased due to interstitial defects

B. Frenkel defects do not alter the density of the solid

C. Non - stoichiometric defects modify the formula of the compound

D. Non - stoichiometric defects do not alter the density of the solid

**Answer: D**



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**34.** Two liquid X and Y form an ideal solution. At 300K vapour pressure of the solution containing 1 mol of X and 3 mol of Y 550 mm Hg. At the same temperature, if 1 mol of Y is further added to this solution, vapour pressure of the solution increases by 10 mm Hg. Vapour pressure (in mmHg) of X and Y in their pure states will be , respectively :

A. 300 and 400

B. 400 and 600

C. 500 and 600

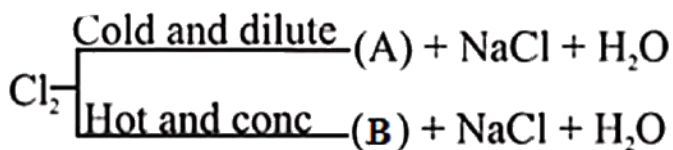
D. 200 and 300

**Answer: B**



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35. Compound (A) and (B) are -



A.  $\text{NaClO}_3$ ,  $\text{NaClO}$

B.  $\text{NaClO}_2$ ,  $\text{NaOCl}$

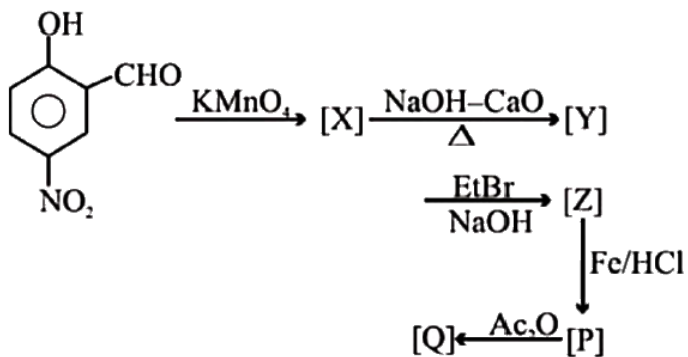
C.  $\text{NaClO}_4$ ,  $\text{NaClO}_3$

D.  $\text{NaOCl}$ ,  $\text{NaClO}_3$

**Answer: D**



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36.

Q is?

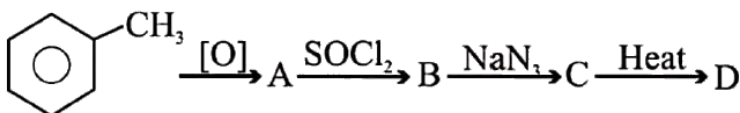
- A. Anisidine
- B. Toluidine
- C. Benzidine
- D. Phenacetin

Answer: D



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37. In the following sequence of reaction, what is D ?



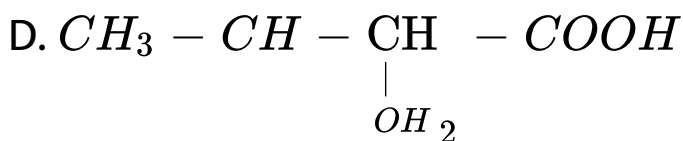
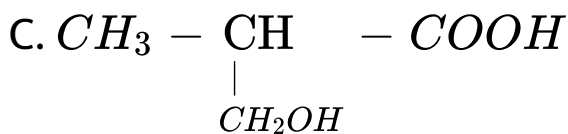
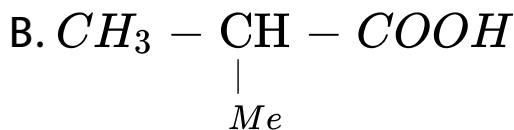
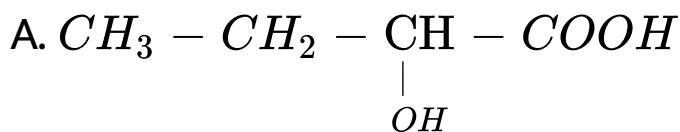
- A. Primary amine
- B. An amide
- C. Phenyl isocyanate
- D. A chain lengthened hydrocarbon

**Answer: C**



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38. An optically active compound 'X' has molecular formula  $C_4H_8O_3$ . It evolves  $CO_2$  with  $NaHCO_3$ . 'X' reacts with  $LiAlH_4$  to give an achiral compound 'X' is:



**Answer: C**



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**39.** Among the following the region of atmosphere containing ozone

A. Troposphere

B. Thermosphere

C. Mesosphere

D. Stratosphere



**Answer: D**



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**40.**  $Na_2O_2$

A. is diamagnetic in nature

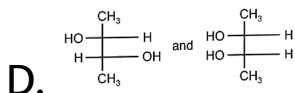
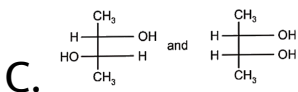
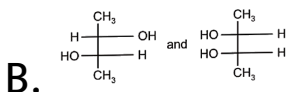
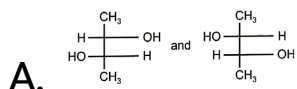
B. is salt of dibasic acid  $H_2O_2$

C. oxidizes  $Cr^{3+}$  (green) to  $CrO_4^{2-}$  (yellow)

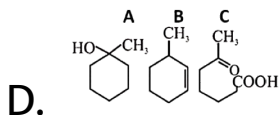
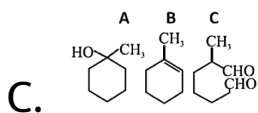
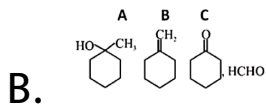
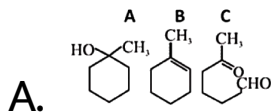
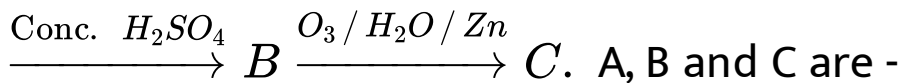
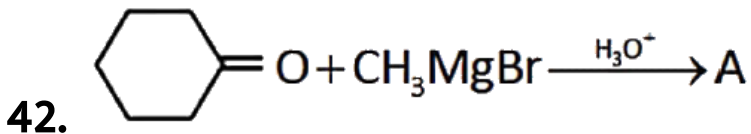
D. all are correct properties of  $Na_2O_2$

**Answer: D**

41. Which of the following pairs of compounds are enantiomers?



Answer: A



**Answer: A**



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**43.** Which one is a biodegradable polymer not falling in polyamide class -

A. Albumin

B. Nylon - 2- nylon 6

C. PHBV

D. Silk

**Answer: C**



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44. The density of neon will be highest at

A. STP

B.  $0^{\circ}C, 2atm$

C.  $273^{\circ}C, 1atm$

D.  $0^{\circ}C, 2atm$

**Answer: B**



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45. In what order the reagents  $Na_2S$ ,  $NaCl$  and  $NaI$  are added to an aqueous solution containing  $Ag^+$ ,  $Cu^{+2}$  and  $Ni^{+2}$  ions in order to precipitate  $Ag^+$  first  $Cu^{+2}$  second and  $Ni^{+2}$  last.

A.  $Na_2S$ ,  $NaI$ ,  $NaCl$

B.  $NaCl$ ,  $Na_2S$ ,  $NaI$

C.  $NaI$ ,  $NaCl$ ,  $Na_2S$

D.  $NaCl$ ,  $NaI$ ,  $Na_2S$

**Answer: D**



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