



CHEMISTRY

BOOKS - NTA MOCK TESTS

NTA NEET SET 84

Chemistry

1. The IUPAC name of the complex $[Pt(NH_3)_2Cl(NH_2CH_3)]Cl$

is

- A. Diamminechloride (aminomethane) platinum (II) bromide
- B. Diammine (methanamine) chloridoplatinum(II) bromide
- C. Diamminechlorido(methanamine) platinum(II) bromide

D. Bisammine (methanamine) chloridoplatinum (II) bromide

Answer: C

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2. Oxidation number of rubidium in Rb_2O , Rb_2O_2 and RbO_2 , can be given respectively, as

A. +1, +4 and +2

B. +2, +1 and $+\frac{1}{2}$

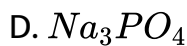
C. +1, +1, and +1

D. +1, +2 and +4

Answer: C

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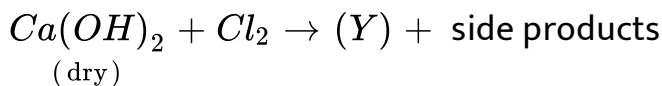
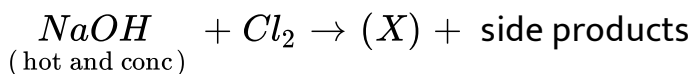
3. For coagulation of arsenious sulphide sol, which one of the following salt solution will be most effective ?



Answer: A

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4. In the following reactions , products (X) and (Y) respectively are



A. NaOCl and $\text{Ca}(\text{ClO}_3)_2$

B. NaClO_3 and $\text{Ca}(\text{Ocl})_2$

C. NaOCl and $\text{Ca}(\text{Ocl})_2$

D. NaClO_3 and $\text{Ca}(\text{ClO}_3)_2$

Answer: B



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5. Preparation of Bakelite proceeds via reactions:

A. Electrophilic addition and dehydration

B. Condensation and elimination

C. Electrophilic substitution and dehydration

D. Nucleophilic addition and dehydration

Answer: C



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6. Radial nodes present in 2s and 2p - orbitals are respectively

A. 0,2

B. 1,0

C. 2,1

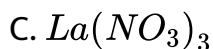
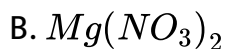
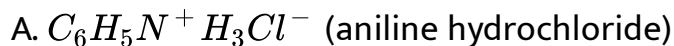
D. 1,2

Answer: B



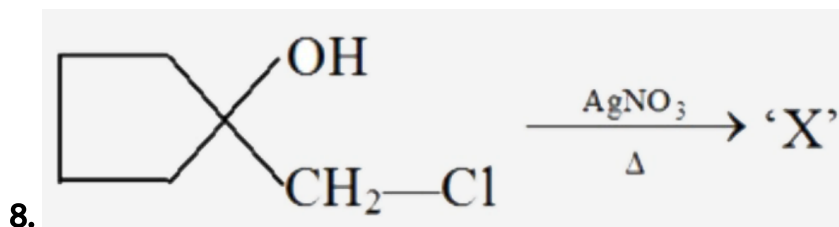
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7. The freezing point of equimolal aqueous solution will be highest for

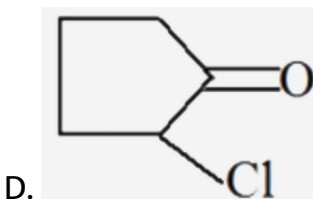
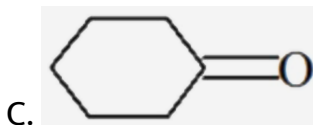
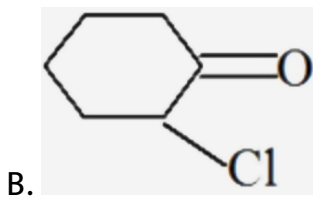
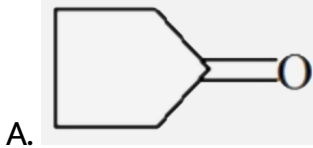


Answer: D

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The product 'X' formed in above reaction is

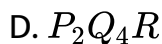
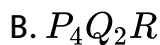
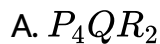


Answer: C

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9. A solid is formed and it has three types of atoms X, Y and Z, X forms a fcc lattice with Y atoms occupying all tetrahedral voids

and Z atoms occupying half of octahedral voids. The formula of solid is :-



Answer: D



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10. Which one of the following statements regarding Henry's law is not correct ?

A. The value of K_H changes with function of the nature of the gas.

- B. Higher the value of K_H at a given pressure, higher is the solubility of the gas in the liquids
- C. The partial pressure of the gas in vapour phase is proportional to the mole fraction of the gas in the solution
- D. Different gases have different K_H (Henry's law constant) value at a same temperature.

Answer: B

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11. 6 mol of a mixture of Mohr's salt and $Fe_2(SO_4)_3$ requires 500 ml of 1 M of $K_2Cr_2O_7$ for complete oxidation in acidic medium .

The mole % of the Mohr's salt in the mixture is

A. 75

B. 50

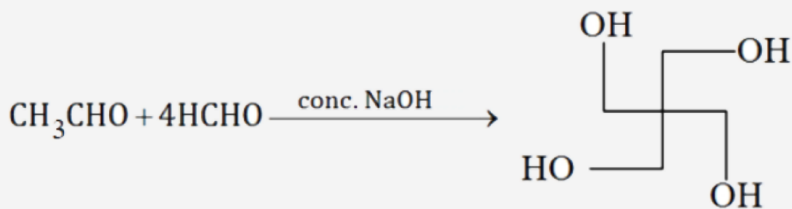
C. 60

D. 25

Answer: B

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12. The number of aldol reaction (s) that occurs in the given transformation is $CH_3CHO + 4HCHO \xrightarrow{\text{conc. NaOH}}$



A. 5

B. 3

C. 2

D. 4

Answer: B



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13. The total number of lone pair of electrons in N_2O_3 is

A. 2

B. 4

C. 6

D. 8

Answer: D



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14. Amylopectin is composed of:

- A. α - D - glucose , $C_1 - C_4$ and $C_1 - C_6$ linkage
- B. α - D - glucose , $C_1 - C_4$ and C_2 and C_6 linkage
- C. β - D - glucose , $C_1 - C_4$ and C_2 and C_6 linkage
- D. β - D - glucose , $C_1 - C_4$ and C_1 and C_6 linkage

Answer: A

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15. An acid-base indicator has a K_a of 3.0×10^{-5} . The acid form of the indicator is red and the basic form is blue. (a) By how much must the pH change in order to change the indicator from 75 % red to 75 % blue?

A. 0.65

B. 1.3

C. 0.954

D. 1.9

Answer: C



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16. If the dipole moment of AB molecule is given by 1.6 D and A - B the bond length is 1\AA then % covalent character of the bond is

A. 25

B. 33.33

C. 66.66

D. 75

Answer: B

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17. Which of the following statement is not correct ?

- A. generally Tollen's reagent is used in detection of unsaturation
- B. Fehling solution is used in detection of glucose
- C. neutral $FeCl_3$ is used in detection of phenol
- D. $NaHSO_3$ is used in detection of carbonyl compound

Answer: A

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18. Match List I (substances) with List II (processes) employed in the manufacture of the substances and select the correct option

	List I (Substances)		List II (Processes)
1.	Sulphuric acid	(i)	Haber's process
2.	Nitric acid	(ii)	Ostwald process
3.	Sodium hydroxide	(iii)	Leblanc process
4.	Ammonia	(iv)	Contact process

A. 1 - (i), 2 - (iv) , 3 - (ii) , 4 - (iii)

B. 1 - (i), 2 - (ii) , 3 - (iii) , 4 - (iv)

C. 1 - (iv), 2 - (iii) , 3 - (ii) , 4 - (i)

D. 1 - (iv), 2 - (ii) , 3 - (iii) , 4 - (i)

Answer: D



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19. The number of $N - CH_2 - N$ bonds in urotropine is

A. 2

B. 4

C. 6

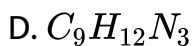
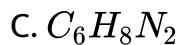
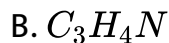
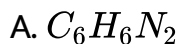
D. 5

Answer: C



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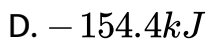
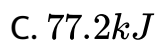
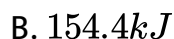
20. In a compound C, H, N atoms are present in 9:1:3.5 by weight. Molecular weight of compound is 108. Its molecular formula is:



Answer: C

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21. Calculate standard free energy change for the reaction



Answer: B

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22. Pb and Sn are extracted from their chief ore by

- A. carbon reduction and self reduction
- B. self reduction and carbon reduction
- C. electrolysis and self reduction
- D. self reduction and electrolysis

Answer: B

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23. Chlorination of toluene in the presence of light and heat followed by the treatment with aqueous KOH gives

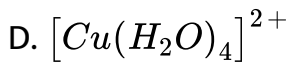
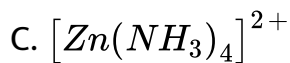
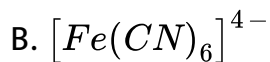
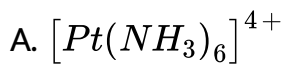
- A. m - Cresol
- B. p - Cresol
- C. 2,4 - Dihydroxytoluene
- D. Benzoic acid

Answer: D

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24. Which of the following co-ordinate complexes is an exception to EAN rule ?

(Given atomic number $Pt = 78$, $Fe = 26$, $Zn = 30$, $Cu = 29$)



Answer: D

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25. The crystal system of a compound with unit cell dimensions $a = 0.388$, $b = 0.388$ and $c = 0.506$ nm and $\alpha = \beta = 90^\circ$ and $\gamma = 120^\circ$ is

A. Hexagonal

B. Cubic

C. Rhombohedral

D. Orthorhombic

Answer: A

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26. The number of isomers for the compound with molecular formula $C_2BrClFI$ is:

A. 2

B. 4

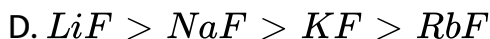
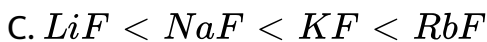
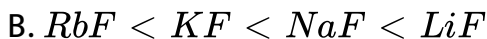
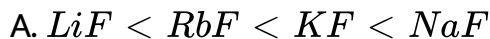
C. 6

D. 9

Answer: C

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27. The solubility order for alkali metal fluoride in water is :



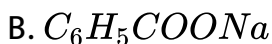
Answer: C



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28. Food preservatives prevent spoilage of food due to microbial growth. The commonly used preservatives are :

A. vegetable oils and sodium benzoate



C. table salt, sugar

D. all of the above

Answer: D

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29. Identify the pollutant gases largely responsible for the discoloured and lustreless nature of marble of the Taj Mahal.

A. N_2 and CO_2

B. SO_2 and O_3

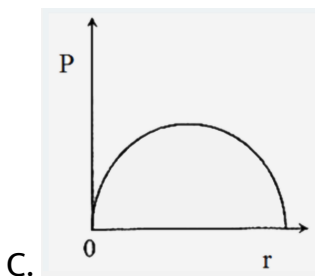
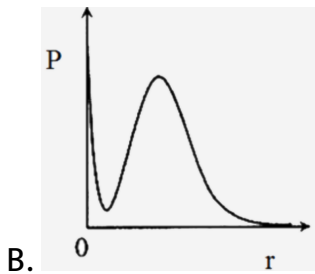
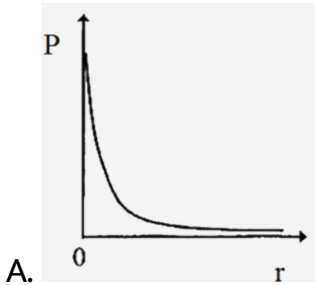
C. CO_2 and NO_2

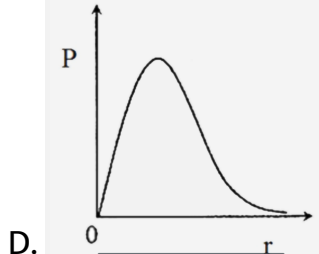
D. SO_2 and NO_2

Answer: D

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30. P is the probability of finding the 1s electron of hydrogen atom in a spherical shell of infinitesimal thickness, dr , at a distance r from the nucleus. The volume of this shell is $4\pi r^2 dr$. The qualitative sketch of the dependence of P on r is

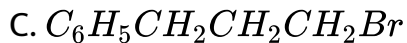
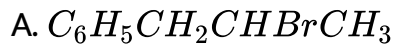




Answer: D

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31. Which of the following will be the major product when 3-phenylpropene reacts with HBr?



Answer: B



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32. In an isothermal expansion of one mole of an ideal gas against vacuum from 5 litre to 50 litre at 300 K, the quantity of heat absorbed by the gas is

- A. zero
- B. 80 lit. Atm
- C. 1380 cal
- D. -1380cal

Answer: A



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33. The lattice energy of solid $NaCl$ is $180K. Calmol^{-1}$. The dissolution of the solid in water in the form of ions is endothermic to the extent of $1K. calmol^{-1}$. If the hydration energies of Na^+ and Cl^- are in ratio 6:5, what is the enthalpy of hydration of Na^+ ion

- A. $-8.5 \text{ kcal mol}^{-1}$
- B. $-97.64 \text{ kcal mol}^{-1}$
- C. $+82.6 \text{ kcal mol}^{-1}$
- D. $+100 \text{ kcal mol}^{-1}$

Answer: B



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34. Three moles of B_2H_6 are completely reacted with methanol.

The number of moles of boron containing product formed is.

A. 2

B. 4

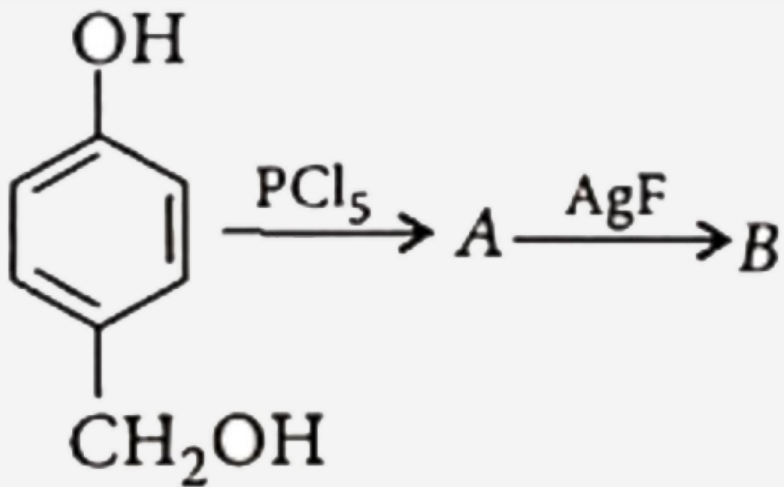
C. 6

D. 3

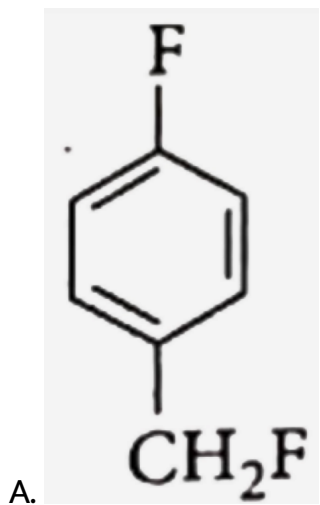
Answer: C

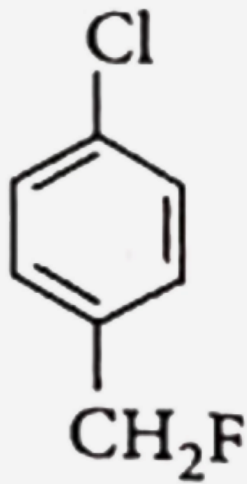


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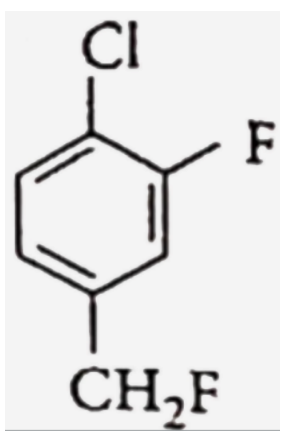


What is B in the given scheme ?

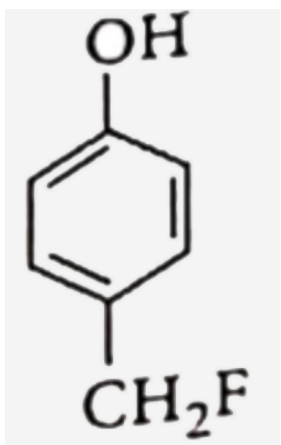




B.



C.

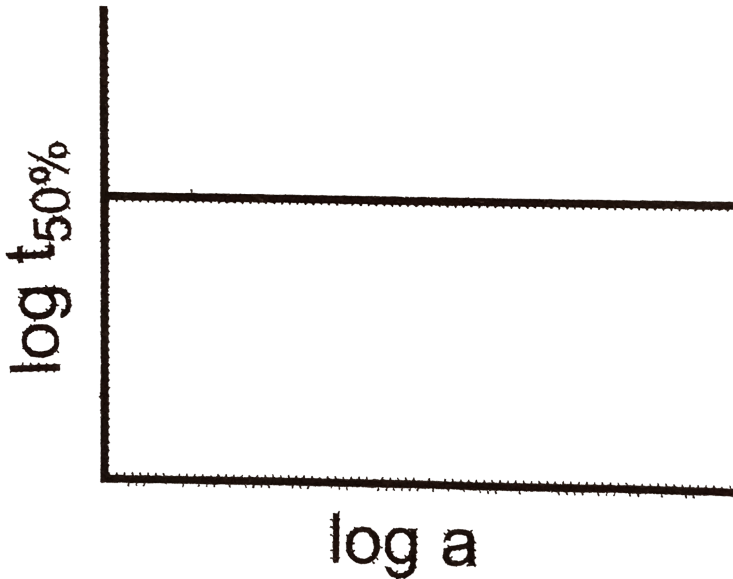


D.

Answer: D

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36. A graph plotted between $\log t_{50\%}$ vs \log concentration is a straight line. What conclusion can you draw from this graph?



A. $n = 1, t_{1/2} = \frac{0.693}{k}$

B. $n = 2, t_{1/2} = \frac{1}{a}$

$$C. n = 1, t_{1/2} = \frac{1}{ka}$$

D. None the these

Answer: A

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37. How many of these compounds can undergo Cannizzaro reaction here

CH_3CHO , CH_3COCH_3 , $HCHO$, $Ph - CHO$, $Ph - CO - CHO$

,

, $PhCOCH_3$

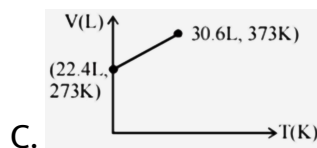
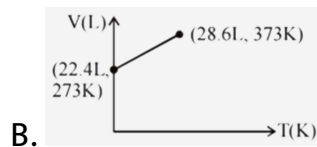
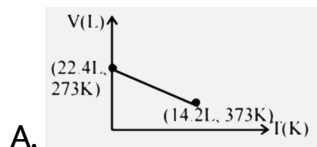
A. 2

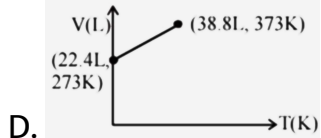
B. 4

C. 6

Answer: B [Watch Video Solution](#)

38. Which of the following volume-temperature ($V - T$) plots represents the behaviour of 1 mole of an ideal gas at the atmospheric pressure?





Answer: C

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39. What final product will form when alcoholic KOH is treated with 1,1-dibromoethane ?

A. Ethene

B. Ethane -1, 2 - diol

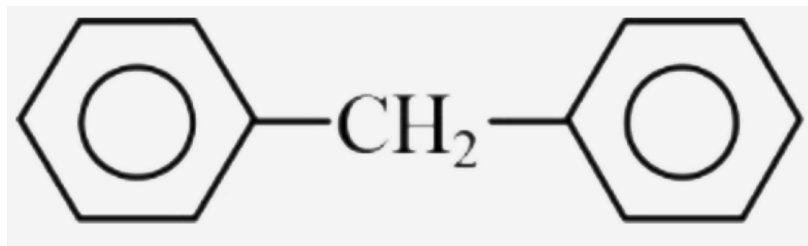
C. Acetaldehyde

D. Ethyne

Answer: D

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40. The molecular formula of diphenylmethane ,



, is $C_{13}H_{12}$,

How many structural isomers are possible when one the the hydrogen is replaced by a chlorine atom ?

- A. 6
- B. 4
- C. 8
- D. 7

Answer: B

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41. The pH of a solution obtained by mixing equal volume of solutions having pH = 3 and pH = 4.

[$\log 5, 5 = 0.74$]

A. 3.42

B. 3.6

C. 4.0

D. 3.26

Answer: D

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42. A compound with molecular mass 180 is acylated with CH_3COCl to get a compound with molecular mass 390. the

number of amino groups present per molecule of the former compound is-

A. 1

B. 3

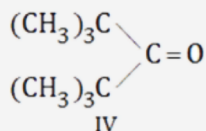
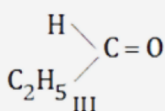
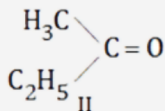
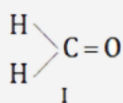
C. 5

D. 4

Answer: C

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43. The correct order of reactivity for the addition reaction of the following carbonyl compounds with ethyl magnesium iodide is



A. $III > II > I > IV$

B. $IV > III > II > I$

C. $I > II > IV > III$

D. $I > III > II > IV$

Answer: D

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44. For the reaction $p + q \rightleftharpoons r + s$, initially concentrations of p and q are equal and at equilibrium the concentration of s will be twice of that of p. What be the equilibrium constant for the reaction ?

A. 2

B. 4

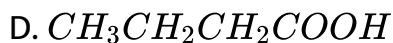
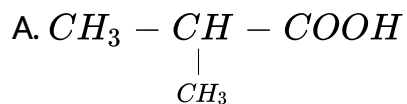
C. 1/4

D. 8

Answer: B

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45. An organic compound A upon reacting with NH_3 gives B. On heating B gives C. C in presence of KOH reacts with Br_2 to yield $CH_3CH_2NH_2$. A is .



Answer: B



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