



CHEMISTRY

BOOKS - NTA MOCK TESTS

NTA NEET SET 19

Chemistry

1. Choose the correctly matched pair from the codes given below:

(1) 2-Octanone	(A)	CH_3 $(\text{CH}_2)_5\text{COCH}_3$
(2) Trimethyl amine	(B)	$(\text{CH}_3)_3\text{C}$ $-\text{NH}_2$
(3) Acrolein	(C)	$\text{CH}_2 = \text{CH}$ $-\text{CN}$
(4) Vinyl acetylene	(D)	$\text{CH}_2 = \text{CH}-\text{C}$ $\equiv \text{CH}$

A. 1 and 4

B. 2 and 3

C. 2 and 4

D. 1 and 3

Answer: A



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2. The current needed to reduce 26.6 g of nitrobenzene to aniline in acidic medium, is

A. 0.4 F

B. 0.6 F

C. 0.8 F

D. 1.2 F

Answer: D

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3. Which of the following compounds will give methyl orange by the reaction with diazonium salt of sodium p - amino benzene sulphonate?

A. Aniline

B. N, N - Dimethyl aniline

C. m - nitro aniline

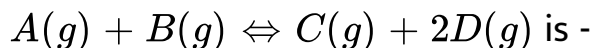
D. m - bromophenol

Answer: B



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4. The relation between K_P and K_C for the reaction



A. $K_P = K_C[RT]^{-1}$

B. $K_P \cdot K_C^{-1} = RT$

C. $K_C K_P^{-1} = RT$

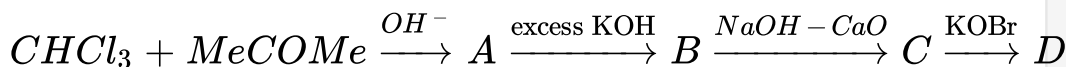
$$D. K_P = K_C[RT]^3$$

Answer: B



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5.



A. $MeCH_2OH$

B. $MeCOOH$

C. Me_2CHOH

D. CH_2Cl_2

Answer: B



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6. Which statement is incorrect -

- A. $Ni(CO_4)$ - Tetrahedral, paramagnetic
- B. $[Ni(CN)_4]^{2-}$ - Square planar, diamagnetic
- C. $Ni(CO)_4$ – Tetrahedral, diamagnetic
- D. $[NiCl_4]^{-2}$ - Tetrahedral, paramagnetic

Answer: A



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7. Mark out the correct statement among the following.

A. Aqueous $AgNO_3$ solution can be stored in a copper bowl.

B. Aqueous $CuSO_4$ solution can be stored in a silver bowl.

C. Cu , Ag can release hydrogen gas from dil HCl.

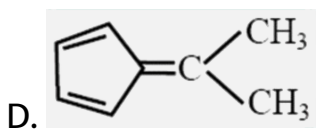
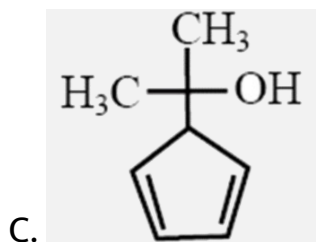
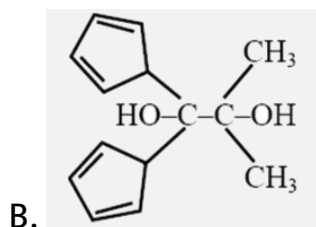
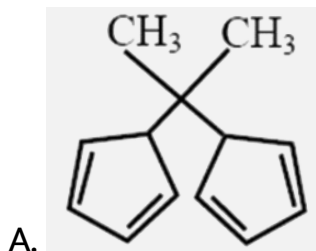
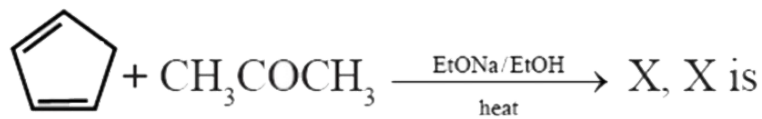
D. H_2 cannot reduce Cu^{2+} and Ag^+ in the form of metals.

Answer: B



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8. In the reaction



Answer: D



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9. Liebermann's test is used for which class of compounds -

A. Alcohols

B. Phenols

C. Aldehydes

D. Ketones

Answer: B

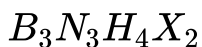


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10. Which of the following statement is is/are true -

(I) Borazine is aromatic

(II) There are four isotopic disubstituted borazine molecules



(III) Borazine is more reactive towards addition reaction than benzene

(IV) Banana bonds in B_2H_6 are longer but stronger than normal $B - H$ bonds

A. I, II and III

B. I, II and IV

C. I, II, III and IV

D. Only II

Answer: C

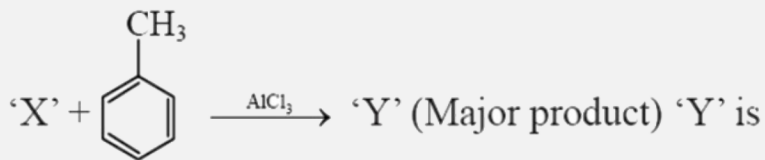
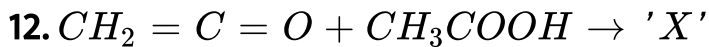
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11. The addition of NH_4Cl to 0.1 M acetic acid will cause

- A. Increase in its pH value
- B. Decrease in its pH value
- C. No change in its pH value
- D. Unpredictable change in its pH value

Answer: B

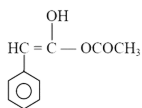
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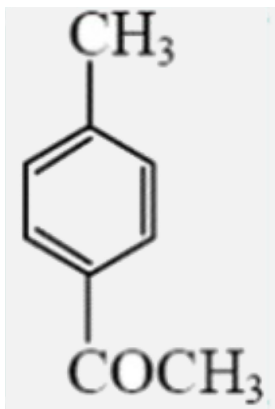
(Major

product) 'Y' is

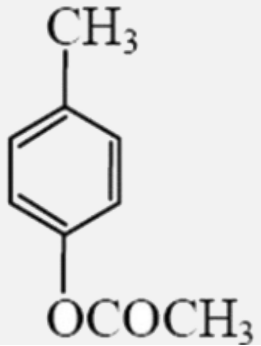
A. o-methyl acetophenone



B.



C.



Answer: C

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13. When roasting is carried out:

(P) sulphide ores are converted into oxide and sulphate

(Q) Remove water of hydration

(R) Melt the ore

(S) Remove arsenic and sulphur impurities

A. I, II & III are correct

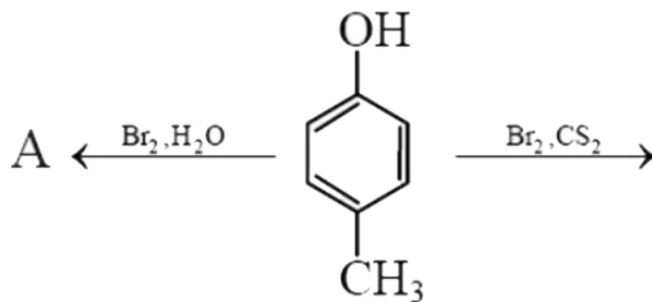
B. I, III & IV are correct

C. I, II & IV are correct

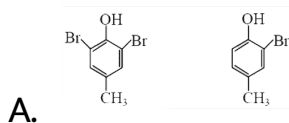
D. II, III & IV are correct

Answer: C

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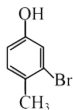
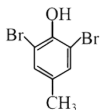
B Predominant 'A' and 'B' are respectively



B.



C.



D.

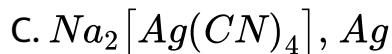
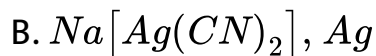
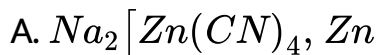


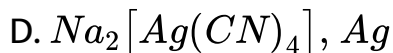
Answer: A



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15. $Ag_2S + NaCN \rightarrow A \xrightarrow{Zn} B$, Hence A and B are -





Answer: B



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16. Cryoscopic constant of a liquid is:

- A. Decrease in freezing point when 1 gram of solute is dissolved per kg of the solvent
- B. Decrease in the freezing point when 1 mole of solute is dissolved per kg of the solvent
- C. Is the elevation for 1 molar solution?
- D. Is a factor used for calculation of elevation in boiling point?

Answer: B



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17. Which of the following is not an essential amino acid -

A. cysteine

B. methionine

C. phenylalanine

D. tryptophan

Answer: A



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18. The reversible reaction



is at equilibrium. What would not happen if ammonia is added -

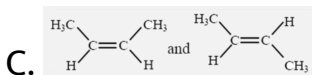
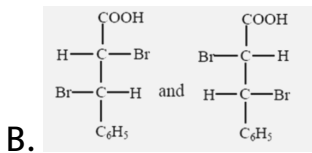
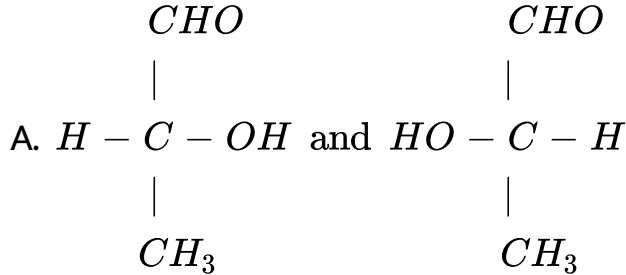
- A. $[SO_3^{2-}]$ would increase
- B. $[Cu(NH_3)_3SO_3]$ would increase
- C. The value of equilibrium constant would not change
- D. $[Cu(NH_3)_4]^{2+}$ would increase

Answer: B



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19. Which of the following pairs are diastereomers?



D. All of these

Answer: C

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20. 4 ml of HCl solution of pH = 2 is mixed with 6 ml of NaOH solution of pH=12 . What would be the final pH of solution ?(log 2 = 0.3)

A. 10.3

B. 11.3

C. 11

D. 4.3

Answer: B



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21. Which of the following is not a part of green chemistry?

A. Photochemistry

B. Sonochemistry

C. Nuclear chemistry

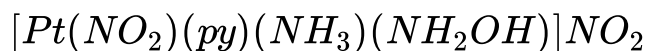
D. Biochemistry

Answer: C



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22. How many geometrical isomers are possible for the square planar complex



- (a) Four
- (b) Five
- (c) Eight
- (d) Three .

A. 4

B. 5

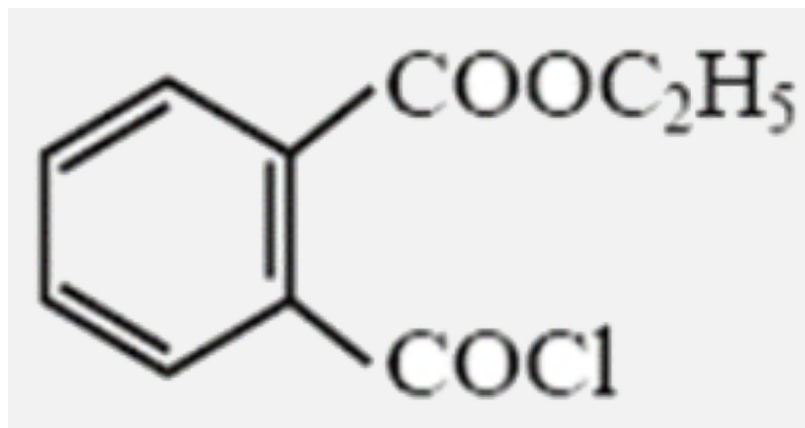
C. 8

D. 3

Answer: D

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23. The IUPAC name of



- A. 2 - chlorocarbonyl ethylbenzoate
- B. 2 - carboxyethyl benzoyl chloride
- C. ethyl -2- (chlorocarbonyl) benzoate

D. ethyl -1- (chlorocarbonyl) benzoate

Answer: C



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24. $A \xrightarrow[HI]{redP} CH_3COOH \xrightarrow{LiAlH_4} B$. What is not true for A and

B ?

A. A is hydrocarbon of general formula C_nH_{2n+2} while B

belong to alkanol

B. A can be obtained by reducing CH_3CH_2Cl while by is

alkanal

C. A and B both belongs to different homologous series

D. A and B both belongs to different homologous series

Answer: C



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25. How do you characterizes $PbCrO_4$?

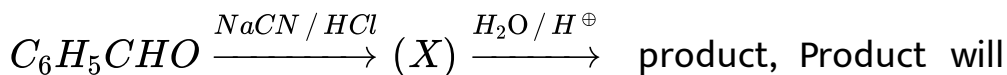
- A. It is yellow in colour
- B. It is soluble in $NaOH$
- C. It is insoluble in CH_3COOH
- D. All fo the above

Answer: D



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26. In the reaction sequence



be

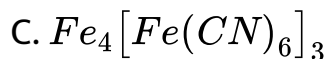
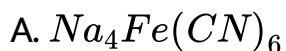
- A. Optically inactive acid
- B. Optically inactive α – hydroxy acid
- C. Racemic mixture of two optically active α - hydroxy acids
- D. Racemic mixture of two optically active secondary alcohols

Answer: C



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27. Prussian blue is -



D. None of these

Answer: C



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28. F-centers are

A. The electrons trapped in anionic vacancies

B. The electrons trapped in cation vacancies

C. Non - equivalent sites of stoichiometric compound

D. All of the above

Answer: A

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29. Amongst H_2O , H_2S , H_2Se and H_2Te the one with highest boiling point is :

A. H_2O because of hydrogen bonding

B. H_2Te because of higher molecular weight

C. H_2S because of hydrogen bonding

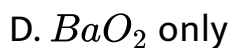
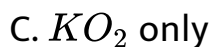
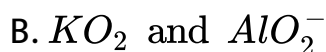
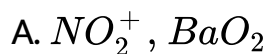
D. H_2Se because of lower molecular weight

Answer: A



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30. Among KO_2 , $KAlO_2$, CaO_2 and NO_2^+ , unpaired electrons is present in :



Answer: C



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31. An organic molecule necessarily shows optical activity if it

- A. Contains asymmetric carbon atoms
- B. Is non - planar
- C. Is non - superimposable on its mirror image
- D. Is superimposable on its mirror image

Answer: C



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32. Microcosmic salt reacts with coloured ions to form characteristic bead which is due to formation of

A. Borates

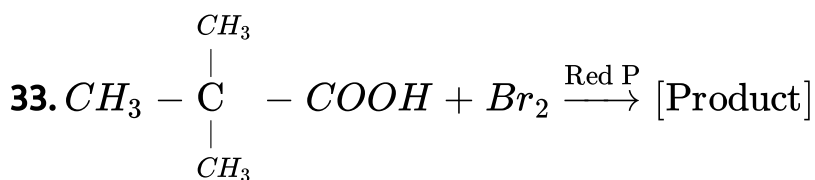
B. Metaphosphates

C. Metaborates

D. Phosphates

Answer: B

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The product of the above reaction is -

A. β - Dibromo acid

B. β, β' - Dibromo acid

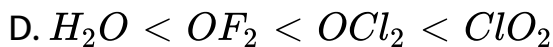
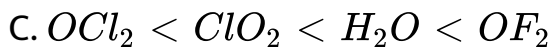
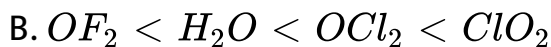
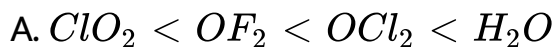
C. β, β', β'' – Tribromo acid

D. No reaction takes place

Answer: D

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34. Which of the following sequence represents the correct increasing order of bond angle in the given molecular ?



Answer: B



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35. $(CH_3)_2C = CHCOCH_3$ can be oxidised to $(CH_3)_2C = CHCOOH$ by

A. Chromic acid

B. $NaOH$

C. Cu at $300^\circ C$

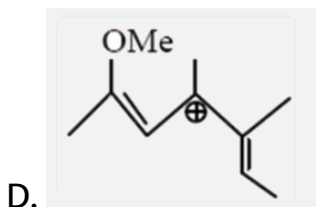
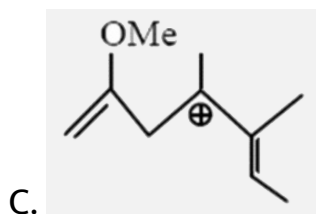
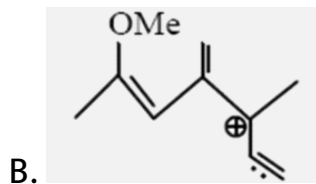
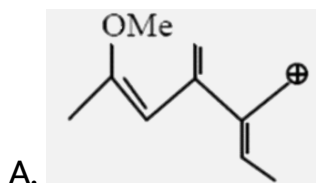
D. $KMnO_4$

Answer: B



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36. Select the most stable carbocation:



Answer: D



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37. Zeolites are extensively used in -

- A. Softening of water and catalyst
- B. Preparing heavy water
- C. Increasing the hardness of water
- D. Mond's process

Answer: A



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38. Which of following statements is false ?

- A. Increase of pressure of a gas causes the amount of adsorption to increase

B. Increase of temperature may increase or decrease the amount of adsorption

C. The adsorption may be monolayer or multilayer

D. Particle size of the adsorbent does not affect the amount of adsorption

Answer: D



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39. Consider the following statements and choose the correct option

(i) Addition of $CdCl_2$ to the Crystals of $AgCl$ will produce cation vacancy

(ii) Addition of $NaCl$ to the crystals of $AgCl$ would not produce cation vacancy

A. both (i) and (ii) are true

B. Only (i) is true

C. Only (ii) is true

D. Both are false

Answer: A

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40. Total vapour pressure of mixture of 1 mol volatile component A ($P^\circ A = 100 \text{ mm Hg}$) and 3 mol of volatile component

B ($P^\circ B = 60 \text{ mm Hg}$) is 75 mm. For such case -

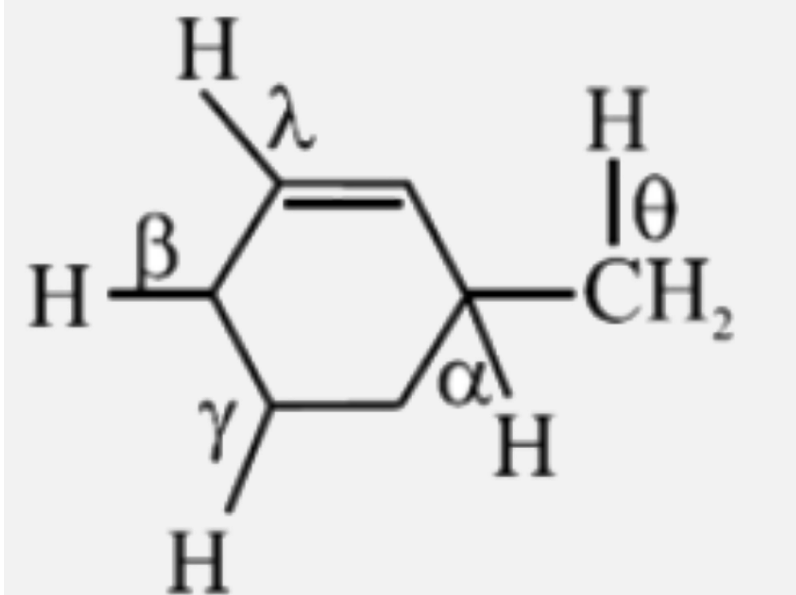
- A. There is positive deviation from Raoult's law
- B. Boiling point has been lowered
- C. Force of attraction between A and B is smaller than that between A and A or between B and B.
- D. All the above statements are correct

Answer: D



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41. The correct order of bond dissociation energies of various $C - H$ bonds present in the compound is



A. $\alpha < \beta < \gamma < \theta < \lambda$

B. $\alpha < \gamma < \theta < \beta < \lambda$

C. $\lambda > \alpha > \theta > \beta > \gamma$

D. $\beta < \alpha < \gamma < \lambda < \theta$

Answer: A

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42. Calculate the number of oxygen atoms required to combine with 7 g of N_2 to form N_2O_3 when 80 % of N_2 is converted to N_2O_3 .

A. 2.3×10^{23}

B. 3.6×10^{23}

C. 1.8×10^{23}

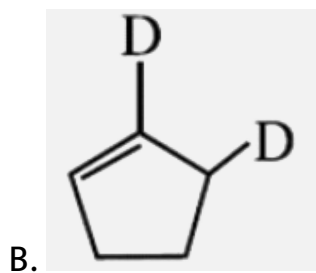
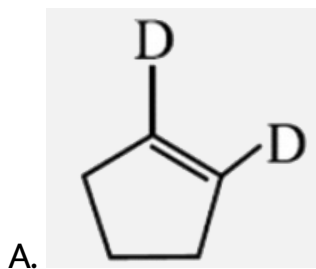
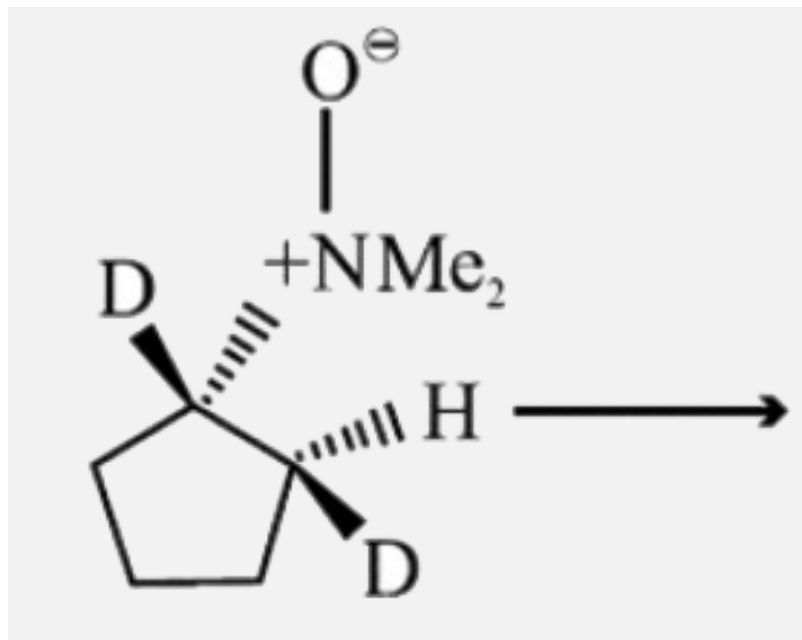
D. 5.4×10^{21}

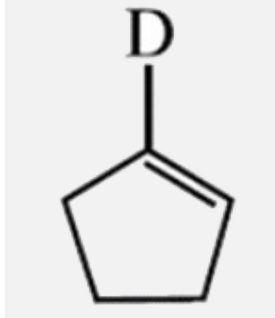
Answer: B



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43. What is the major product in the following reaction :





C.

D. both (A) and (B) in almost equal proportion.

Answer: D

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44. Which of the following is an elastomer?

A. Vulcanized rubber

B. Dacron

C. Polystyrene

D. Melamine

Answer: A



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45. Select the incorrect statement.

A. $NaOH$ can be stored in a vessel made of aluminium

B. HNO_3 can be stored in a vessel made of
Be/Aluminium alloy

C. HF can be stored in a vessel coated of wax

D. HF attacks glass

Answer: A





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