

Topic : Structural Determination

Type of Questions

Single choice Objective ('-1' negative marking) Q.1 to Q.5

(3 marks, 3 min.)

M.M., Min.

[15, 15]

Comprehension ('-1' negative marking) Q.6

(3 marks, 3 min.)

[3, 3]

Subjective Questions ('-1' negative marking) Q.7

(4 marks, 5 min.)

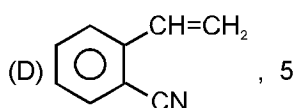
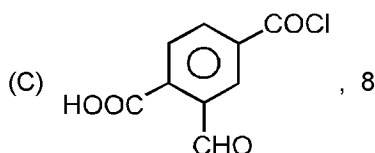
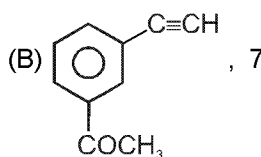
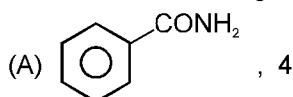
[4, 5]

Match the Following (no negative marking) Q.8

(8 marks, 10 min.)

[8, 10]

1. Which of the following is correctly matched with degree of unsaturation ?



2. How many alkene isomers will produce 1-Ethyl-3-methylcyclopentane on catalytic hydrogenation ?

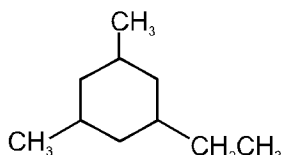
(A) 6

(B) 7

(C) 8

(D) 9

3. How many products (structural isomers) are formed by monochlorination of ?

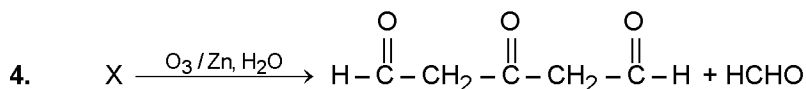


(A) 6

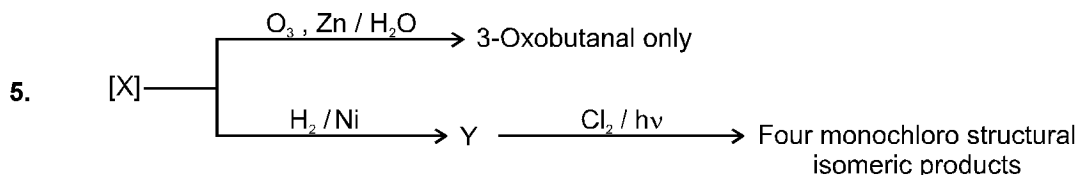
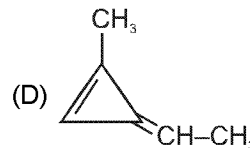
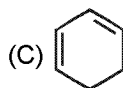
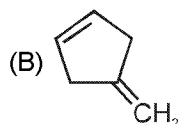
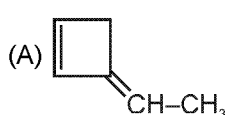
(B) 7

(C) 8

(D) 9



The structure of X will be :



Compound 'X' is :

(A) 1-Methylcyclopropene

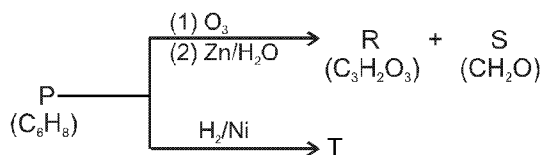
(B) 1, 4-Dimethylcyclohexa-1,4-diene

(C) 1, 4-Dimethylcyclohexa-1,3-diene

(D) 1, 2-Dimethylcyclohexa-1,4-diene



6. Comprehension #



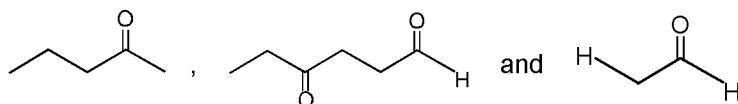
(a). Total number of monochloro structural products are formed on chlorination of "T" :

- (A) 2 (B) 3 (C) 4 (D) 5

(b). How many alkyne can give "T" on catalytic hydrogenation :

- (A) 1 (B) 2 (C) 3 (D) Not possible

7. A compound with molecular formula $\text{C}_{13}\text{H}_{24}$ absorbs two molar equivalents of hydrogen to form 3-Ethyl-7-methyldecane. On reductive ozonolysis it forms following three products.



Assign the structure of the compound.

8. Match the column :

Column (I) (Compound)	Column (II) (No. of monochloro structural product)
(A) $\xrightarrow{\text{Cl}_2/h\nu}$	(p) = 1
(B) $\xrightarrow{\text{Cl}_2/h\nu}$	(q) = 2
(C) $\xrightarrow{\text{Cl}_2/h\nu}$	(r) = 3
(D) $\xrightarrow{\text{Cl}_2/h\nu}$	(s) = 4

Answer Key

DPP No. # 8

1. (B) 2. (C) 3. (B) 4. (B) 5. (D)
 6. (a). (C) (b). (A) 8. (A → q) ; (B → s) ; (C → p) ; (D → r)

Hints & Solutions

DPP No. # 8

