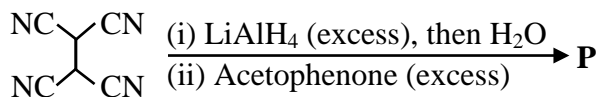


ORGANIC CHEMISTRY

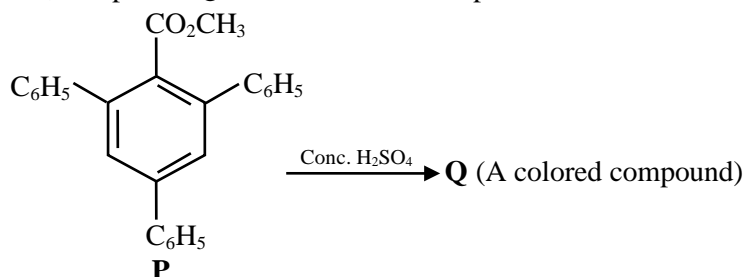
CARBOXYLIC ACID & THEIR DERIVATIVE

1. The total number of sp^2 hybridised carbon atoms in the major product **P** (a non-heterocyclic compound) of the following reaction is _____.



[JEE(Advanced) 2023]

2. In the following reaction, compound **Q** is obtained from compound **P** via an ionic intermediate



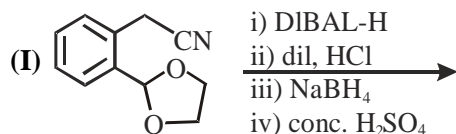
What is the degree of unsaturation of **Q** ?

[JEE(Advanced) 2020]

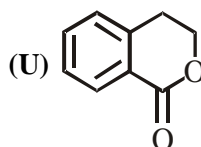
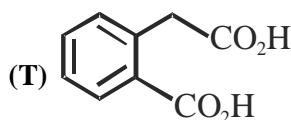
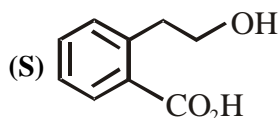
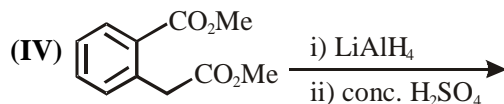
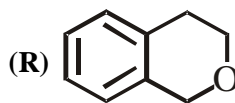
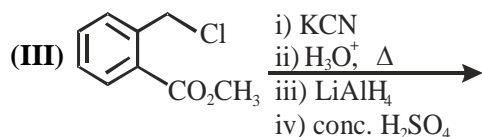
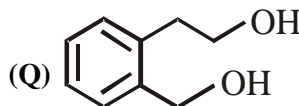
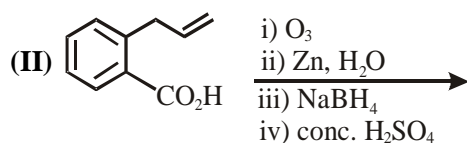
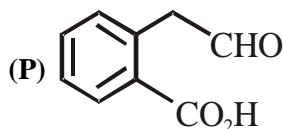
3. Answer the following by appropriately matching the lists based on the information given in the paragraph.

List-I includes starting materials and reagents of selected chemical reactions. List-II gives structures of compounds that may be formed as intermediate products and/or final products from the reactions of List-I.

List-I



List-II



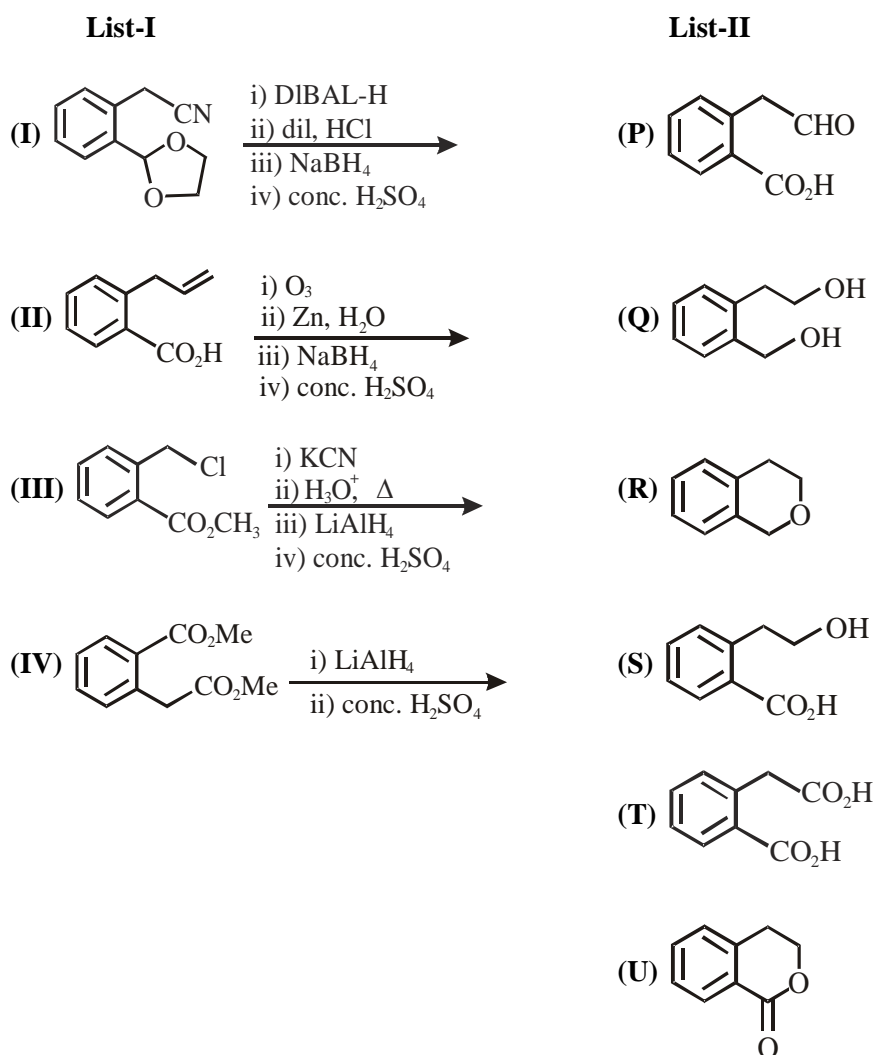
Which of the following options has correct combination considering List-I and List-II?

[JEE(Advanced) 2019]

- (A) (III), (S), (R)
 (B) (IV), (Q), (R)
 (C) (III), (T), (U)
 (D) (IV), (Q), (U)

4. Answer the following by appropriately matching the lists based on the information given in the paragraph

List-I includes starting materials and reagents of selected chemical reactions. List-II gives structures of compounds that may be formed as intermediate products and/or final products from the reactions of List-I.

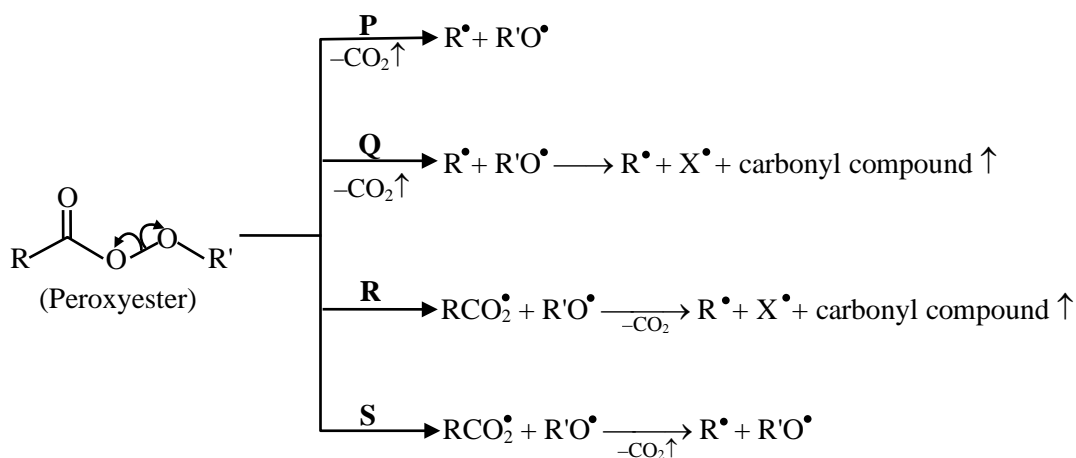


Which of the following options has correct combination considering List-I and List-II?

[JEE(Advanced) 2019]

- (A) (I), (Q), (T), (U) (B) (II), (P), (S), (U)
 (C) (II), (P), (S), (T) (D) (I), (S), (Q), (R)

5. Different possible **thermal** decomposition pathways for peroxyesters are shown below. Match each pathway from List-I with an appropriate structure from List-II and select the correct answer using the code given below the lists. [JEE(Advanced) 2014]



List-I

- (P) Pathway **P**
- (Q) Pathway **Q**
- (R) Pathway **R**
- (S) Pathway **S**

List-II

- (1)
- (2)
- (3)
- (4)

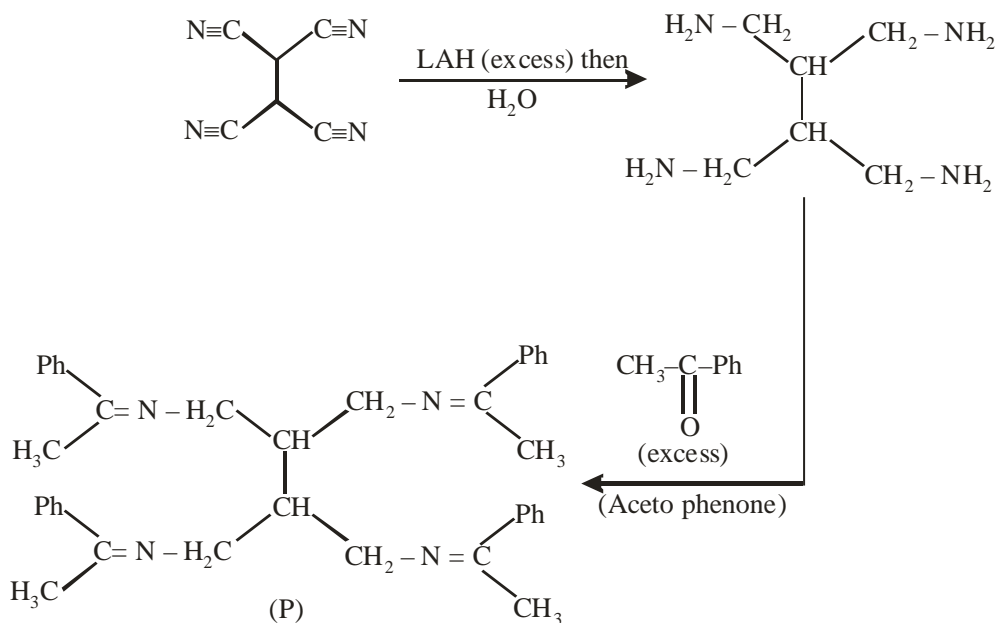
Code :

- | | P | Q | R | S |
|-----|---|---|---|---|
| (A) | 1 | 3 | 4 | 2 |
| (B) | 2 | 4 | 3 | 1 |
| (C) | 4 | 1 | 2 | 3 |
| (D) | 3 | 2 | 1 | 4 |

SOLUTIONS

1. Ans. (28)

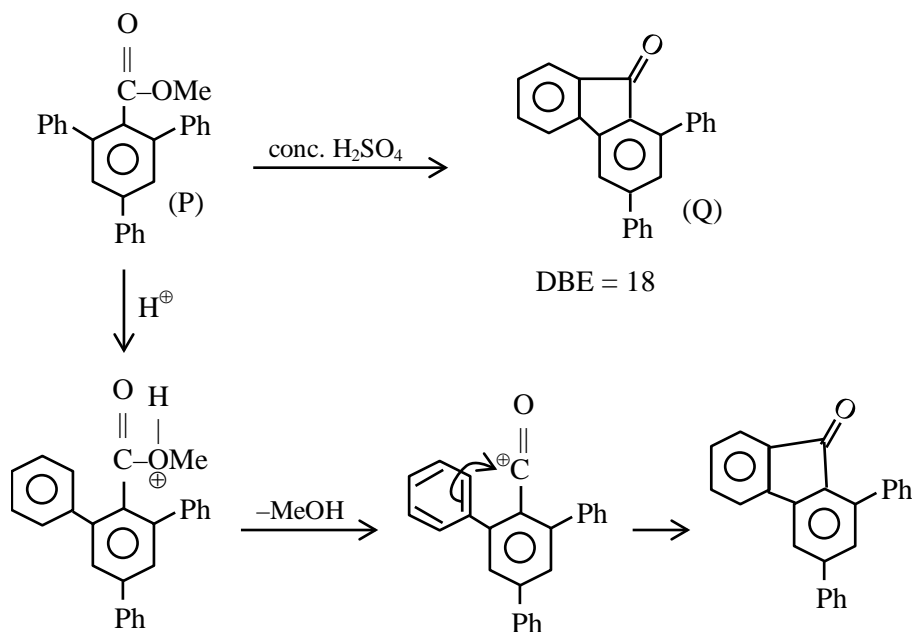
Sol.



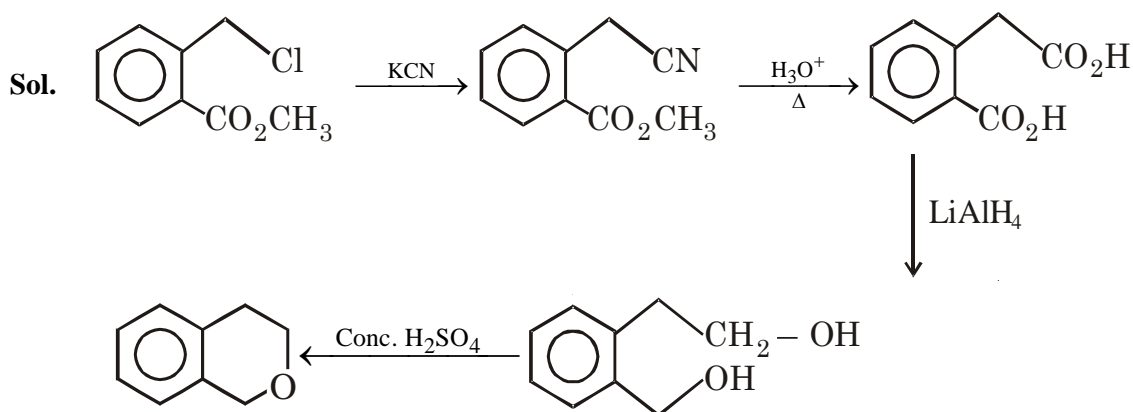
Total number of sp^2 hybridised C-atom in P = 28

2. Ans. (18.00)

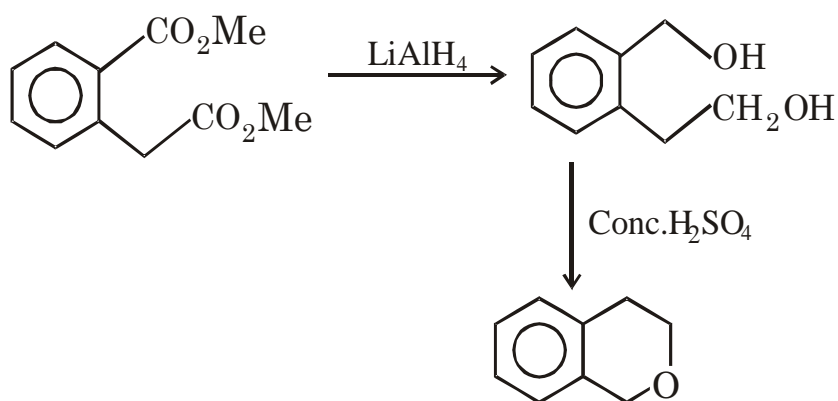
Sol.



3. Ans. (B)



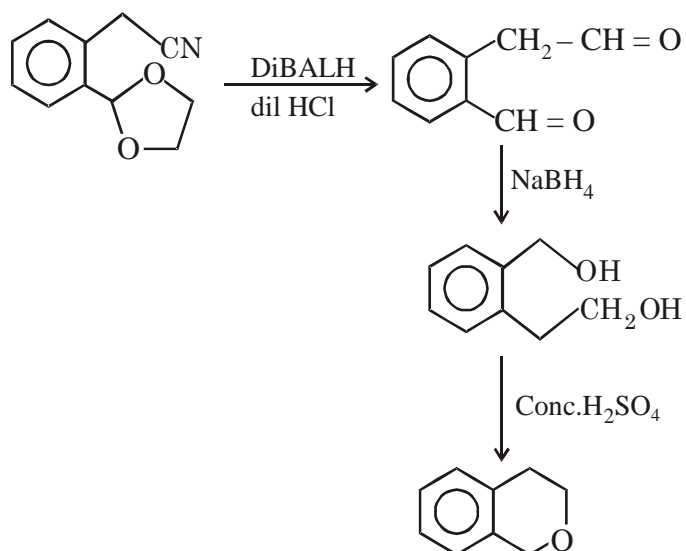
III, T, Q, R



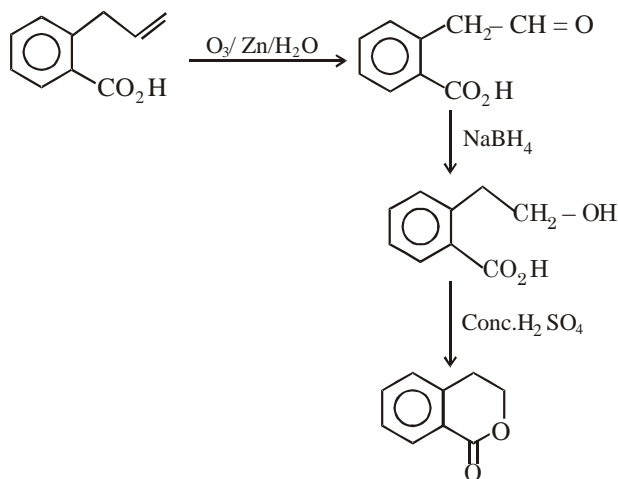
IV, Q, R

4. Ans. (B)

Sol.

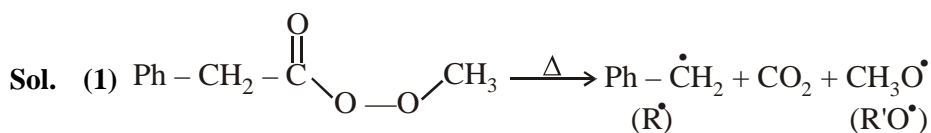


I, Q, R

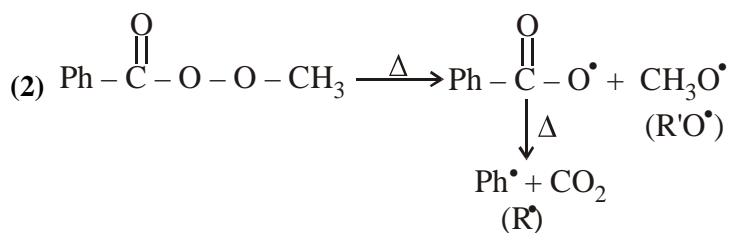


II, P, S, U

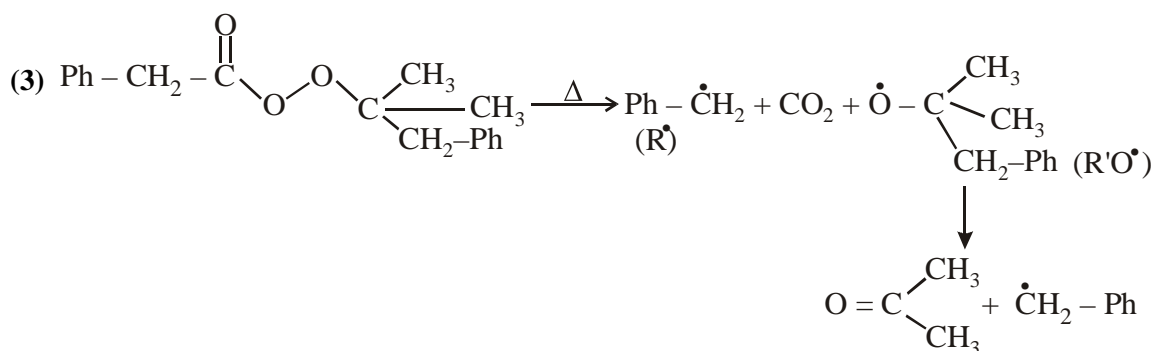
5. Ans. (A)



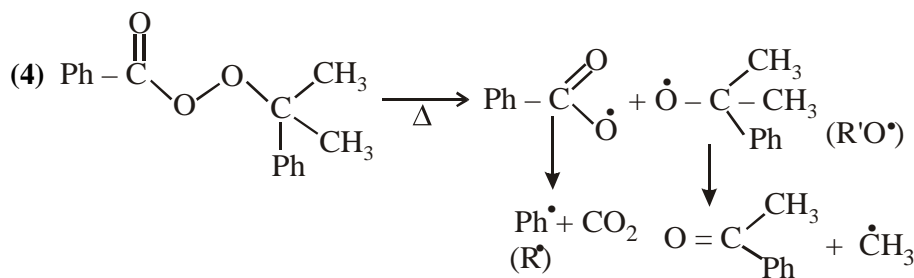
(1) → Pathway (P)



(2) → Pathway (S)



(3) → Pathway (Q)



(4) → Pathway (R)