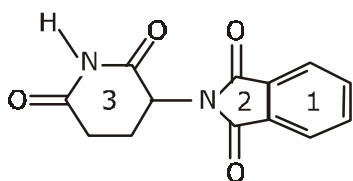


Please read following **SHORT WRITE UP** and **ANSWER** subsequent questions (1 - 9) :

Over half of the pharmaceuticals sold commercially are chiral compounds. However until relatively, most chiral drugs produced synthetically from achiral starting materials, were produced and sold as racemates. The reason is that separation of racemates into their optically pure enantiomeric components requires special procedures that add cost to the final product.

The land mark case that dramatically demonstrated the potential pitfalls in marketing a racemic drug involved thalidomide a compound first marketed as a sedative in Europe in 1958.

The (R) - (+) enantiomer of thalidomide was found to have a higher sedative activity.



Thalidomide

Q.1 Which ring forms tautomer in above structure ?

- (A) 1 (B) 2
(C) 3 (D) 1 & 2

Q.2 How many chiral centres are present in above compound ?

- (A) 1 (B) 3
(C) 4 (D) 2

Q.3 In which ring, most acidic hydrogen is present ?

- (A) 3 (B) 2
(C) 1 & 2 (D) 2 & 3

Q.4 Which ring has more basic Nitrogen ?

- (A) 2 (B) 1
(C) 1 & 3 (D) 3

Q.5 A 0.1 M solution of enantiomerally pure thalidoimide has an observed rotation of +0.20° in 1 dm sample container. What is the specific rotation of above compound and its enantiomer ?

- (A) +13.33, +13.33 (B) -13.33, +13.33
(C) +13.33, -13.33 (D) -13.33, -13.33

Q.6 What is the observed rotation if the solution is mixed with an equal volume of 0.1 M enantiomer of thalidoimide -

- (A) + 0.20° (B) - 0.20°
(C) 0° (D) - 13.33°

Q.7 What is observed rotation if solution of thalidoimide is diluted with an equal volume of the solvent -

- (A) + 0.1 (B) - 0.1
(C) + 13.33 (D) - 13.33

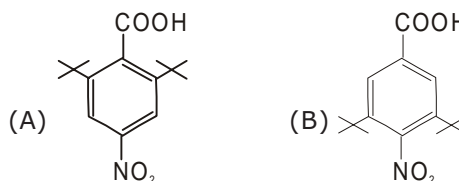
Q.8 Why are most of chiral drugs are sold as racemate because ?

- (A) Separation is impossible
(B) Costly separation of enantiomer
(C) They have identical physiological effect on body
(D) No specific reason.

Q.9 Physiologically active & inactive thalidoimide can be separated & this is called ?

- (A) Racemization
(B) Resolution
(C) Inversion
(D) Asymmetric synthesis

Q.10 Which is a stronger acid ?



- (A) Both have equal acidity
(D) None of these

CHEMISTRY IIT JEE (CLASS TEST - 8) (ORGANIC) ANSWER KEY

Name : Date :

	A	B	C	D		A	B	C	D		A	B	C	D
1	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	5	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	9	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	6	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	10	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	7	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>					
4	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	8	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>					