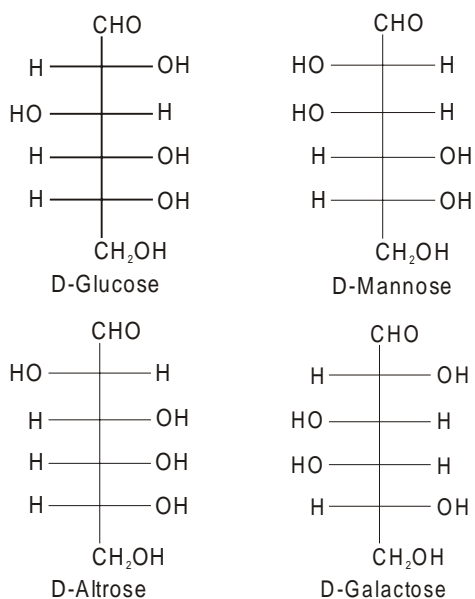
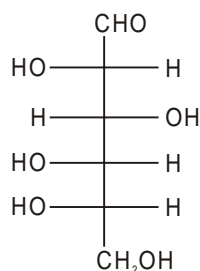


Refer to the structures of D-aldoses below that are synthesized from D-glyceraldehyde to answer question 1 - 7.



Q.1 What is the relationship between D-glucose and the molecule shown below ?



- (A) Diastereomers (B) Enantiomers
(C) Epimers (D) Not stereoisomers

Q.2 What is the most specific relationship between D-glucose and D-altrose ?

- (A) Diastereomers (B) Enantiomers
(C) Epimers (D) Not stereoisomers

Q.3 What is the most specific relationship between D-mannose and D-galactose ?

- (A) Diastereomers (B) Enantiomers
(C) Epimers (D) Not stereoisomers

Q.4 How many chiral centers are present in D-glucose ?

- (A) 0 (B) 1 (C) 4 (D) 6

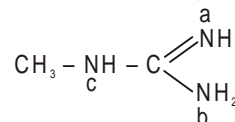
Q.5 What is the maximum number of optically active stereoisomers for the glucose molecule ?

- (A) 0 (B) 4 (C) 8 (D) 16

Q.6 Of the four structure shown, which are diastereomers of D-glucose ?

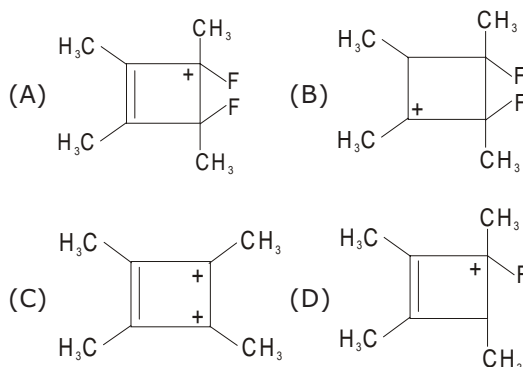
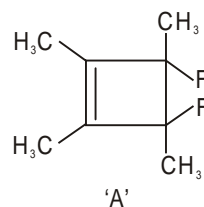
- (A) D-mannose
(B) D-galactose and D-mannose
(C) D-mannose, D-altrose, and D-galactose
(D) D-altrose

Q.7 Determine which nitrogen atom is the most basic in the following compound.



- (A) a (B) b (C) c
(D) b & c are of equal basicity & are more basic than a

Q.8 When compound A is treated with two equivalents of SbF_5 (a very strong Lewis acid) it ionizes to give a carbocation B. What is B :



Q.9 Which of the following has more number of resonating structures ?

- (A) Sulphur dioxide
(B) Ozone
(C) Both have same number of resonating structures
(D) None of these

Q.10 A meso alkane having the molecular formula C_8H_{18} is-

- (A) 3, 4-dimethylhexane
(B) 2, 3-dimethylhexane
(C) Both of the above
(D) 2, 2, 3, 3-tetramethylhexane.

CHEMISTRY IIT JEE (CLASS TEST - 5) (ORGANIC) ANSWER KEY

Name : Date :

	A	B	C	D	E		A	B	C	D	E		A	B	C	D	E
1	<input type="radio"/>	<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"/>	<input type="radio"/>	9	<input type="radio"/>	<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"/>	<input type="radio"/>	6	<input type="radio"/>	<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"/>	<input type="radio"/>
3	<input type="radio"/>	<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"/>	<input type="radio"/>						
4	<input type="radio"/>	<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"/>	<input type="radio"/>						