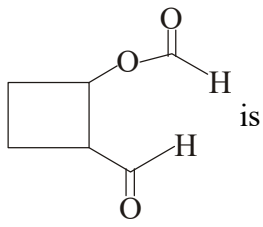
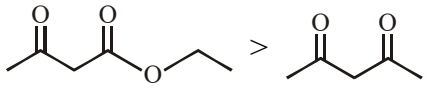
CLASS : ADV_CC **TIME: 45 MIN** **CLASS TEST-1**

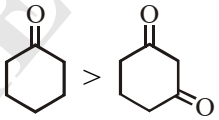
Single correct :

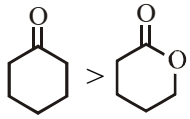
Q.1 IUPAC name of  is

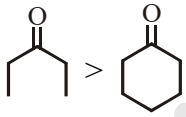
(A) Cyclobutane-1-carbaldehyde-2-carboxylate
(B) 2-Formyl cyclobutane carboxylate
(C) 2-Formylcyclobutyl methanoate
(D) 2-Methanoyloxy cyclobutane carbaldehyde

Q.2 Which of following has correct order of % enol content ?

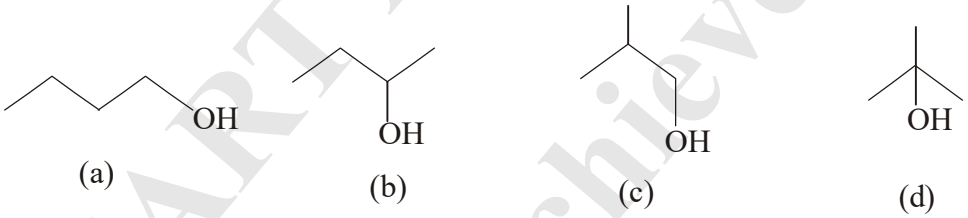
(A) 

(B) 

(C) 

(D) 

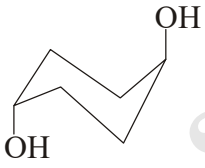
Q.3 Four isomeric alcohols are possible for molecular formula $C_4H_{10}O$.

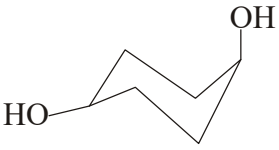


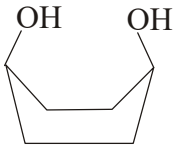
(a) (b) (c) (d)

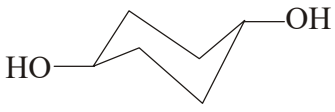
Which of the following statement is true for given compounds?
(A) Correct boiling point order is a >b>c>d
(B) Boiling point of b > a
(C) Boiling point of c > a
(D) Solubility of c > d.

Q.4 Most stable conformation of 1,4-Cyclohexane diol in its cis form is :

(A) 

(B) 

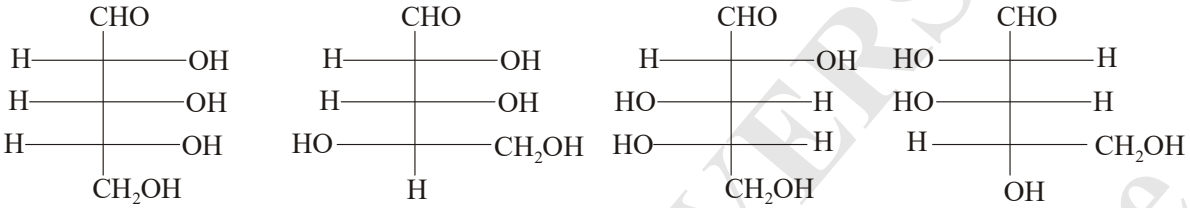
(C) 

(D) 

Q.5 Which of the following statement is not correct.
(A) Cyclobutane is a planar compound
(B) Trans cyclohexadecene is relatively more stable than its cis form
(C) Cis form of 1, 3, 5-trimethylclohexane is relatively more stable than its trans form
(D) Cis 1, 2-dichloroethene is relatively more stable than its trans form.

Comprehension :

Paragraph for question nos. 6 to 8



(I) **(II)** **(III)** **(IV)**

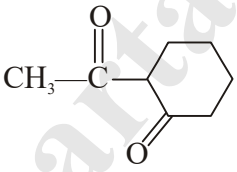
Q.6 Which of the above compounds are enantiomers?
(A) I and III (B) II and III (C) II and IV (D) I and IV

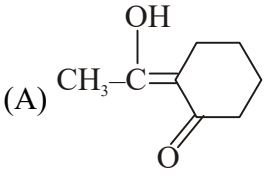
Q.7 Which of the above compounds are identical?
(A) III and IV (B) II and III (C) I and II (D) I and III

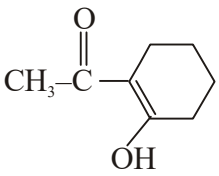
Q.8 Which of the above compound(s) have L-configuration ?
(A) I and III (B) III only (C) III and IV (D) II and IV

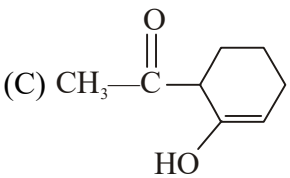
More than one correct :

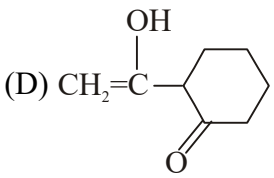
Q.9 Select true statement :
(A) Gauche form of 3-hydroxy propanol is more stable than it's anti form
(B) Anti form of n-butane (across $C_2 - C_3$) is more stable than it's Gauche form.
(C) At room temperature mole fraction of eclipsed form is almost zero.
(D) Dipole moment of 1,2-dichloro ethane decreases on heating.

Q.10 Tautomers of the compound  is / are

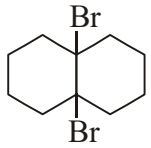

(A)


(B)

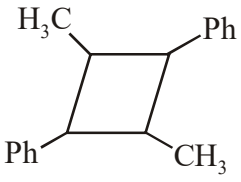

(C)

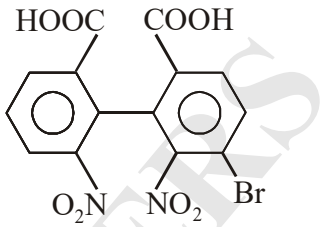

(D)

Q.11 Which of the following compound can show geometrical isomerism as well as optical isomersim ?

(A) 

(B) 

(C) 

(D) 

Q.12 Which of the following statement is / are **incorrect**?

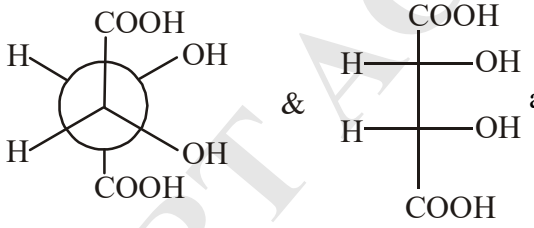
(A) Boiling point of R-Butan-2-ol is 99.5° C while boiling point of S-Butan-2-ol is 90.7° C.

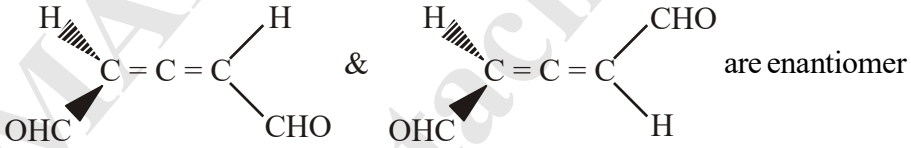
(B) Density of R-Butan-2-ol is 0.808 g/ml while density of S-Butan-2-ol is 0.909 g/ml.

(C) Specific rotation of R-Butanol is –13.52° while specific rotation of S-Butan-2-ol is +23.57°

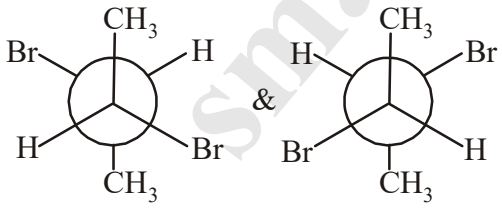
(D) Melting point of R-Butan-2-ol is greater than melting point of S-Butan-2-ol.

Q.13 Which of the following option is not correct ?

(A)  are diastereomer

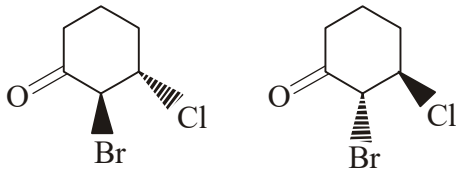
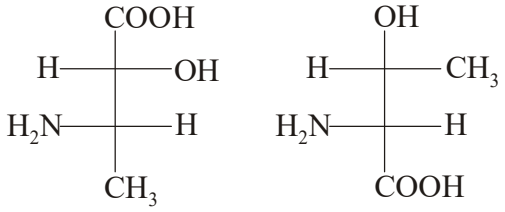
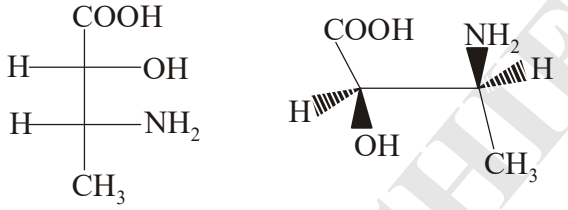
(B)  are enantiomer

(C) E-3-Bromohex-3-ene & Trans-3-bromo but-3-ene are identical compound

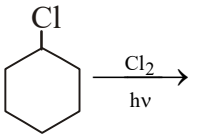
(D)  are identical compound.

Match the column :

Q.14

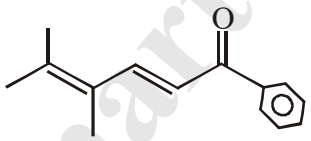
	Column I (Pair of compounds)	**Column II (Relationship)**
(A)		(P) Enantiomer
(B)		(Q) Diastereomer
(C)		(R) Positional isomer
		(S) Chain isomer

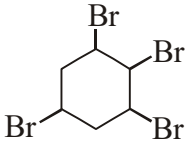
Subjective :

Q.15  number of theoritically possible dichloro derivatives

Q.16 How many total isomers are possible from C_3H_6O and also find out the number of optically active isomers?

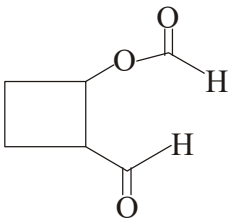
Q.17 How many 'H' will be replace by 'D' when given compound react with $NaOD^{\ominus}/ D_2O$ for a long time.



Q.18 How many stereoisomers are possible for  ?

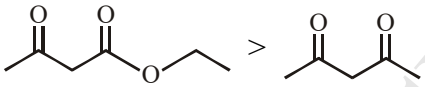
CLASS : ADV_CC **TIME: 45 MIN** **CLASS TEST-1**

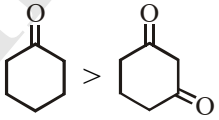
Single correct :

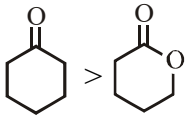
Q.1 IUPAC name of  is

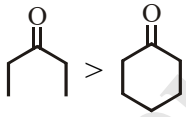
(A) Cyclobutane-1-carbaldehyde-2-carboxylate
(B) 2-Formyl cyclobutane carboxylate
(C*) 2-Formylcyclobutyl methanoate
(D) 2-Methanoyloxy cyclobutane carbaldehyde

Q.2 Which of following has correct order of % enol content ?

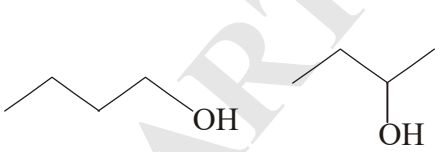
(A) 

(B) 

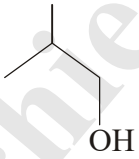
(C*) 

(D) 

Q.3 Four isomeric alcohols are possible for molecular formula $C_4H_{10}O$.


(a)

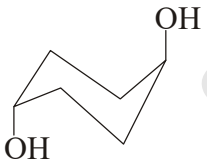
(b)

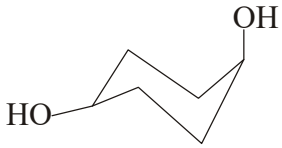

(c)

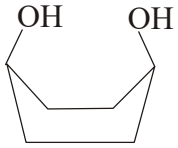

(d)

Which of the following statement is true for given compounds?
(A*) Correct boiling point order is a >b>c>d
(B) Boiling point of b > a
(C) Boiling point of c > a
(D) Solubility of c > d.

Q.4 Most stable conformation of 1,4-Cyclohexane diol in its cis form is :

(A) 

(B) 

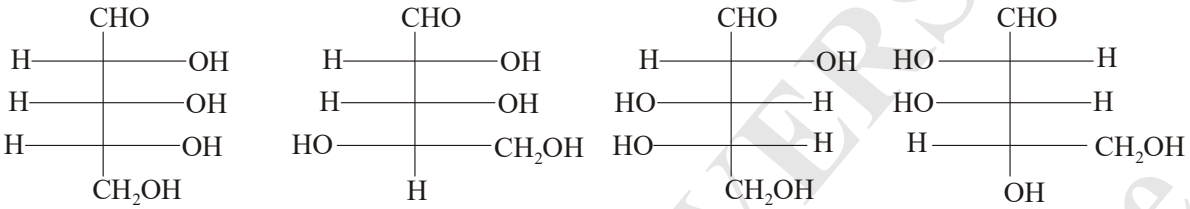
(C*) 

(D) 

Q.5 Which of the following statement is not correct.
(A*) Cyclobutane is a planar compound
(B) Trans cyclohexadecene is relatively more stable than its cis form
(C) Cis form of 1, 3, 5-trimethylclohexane is relatively more stable than its trans form
(D) Cis 1, 2-dichloroethene is relatively more stable than its trans form.

Comprehension :

Paragraph for question nos. 6 to 8



(I) **(II)** **(III)** **(IV)**

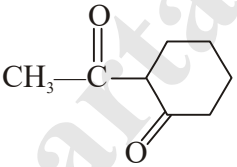
Q.6 Which of the above compounds are enantiomers?
(A) I and III (B) II and III (C*) II and IV (D*) I and IV

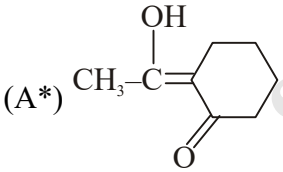
Q.7 Which of the above compounds are identical?
(A) III and IV (B) II and III (C*) I and II (D) I and III

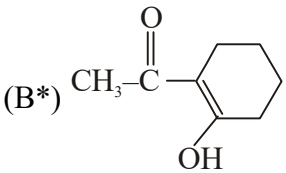
Q.8 Which of the above compound(s) have L-configuration ?
(A) I and III (B) III only (C*) III and IV (D) II and IV

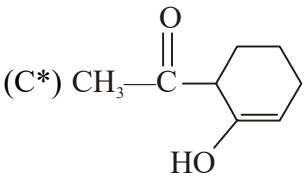
More than one correct :

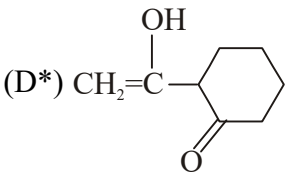
Q.9 Select true statement :
(A*) Gauche form of 3-hydroxy propanol is more stable than it's anti form
(B*) Anti form of n-butane (across $C_2 - C_3$) is more stable than it's Gauche form.
(C*) At room temperature mole fraction of eclipsed form is almost zero.
(D) Dipole moment of 1,2-dichloro ethane decreases on heating.

Q.10 Tautomers of the compound  is / are

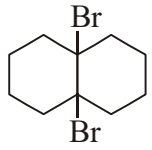




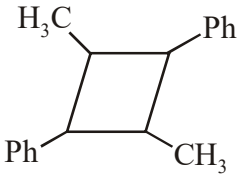


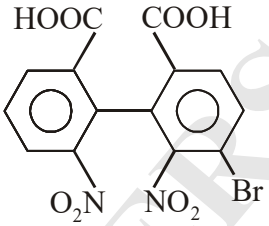


Q.11 Which of the following compound can show geometrical isomerism as well as optical isomersim ?

(A*) 

(B*) 

(C) 

(D) 

Q.12 Which of the following statement is / are **incorrect**?

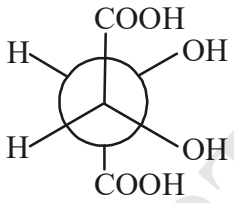
(A*) Boiling point of R-Butan-2-ol is 99.5° C while boiling point of S-Butan-2-ol is 90.7° C.

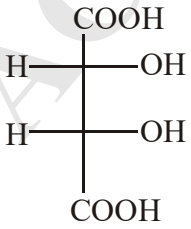
(B*) Density of R-Butan-2-ol is 0.808 g/ml while density of S-Butan-2-ol is 0.909 g/ml.

(C*) Specific rotation of R-Butanol is –13.52° while specific rotation of S-Butan-2-ol is +23.57°

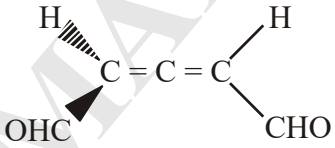
(D*) Melting point of R-Butan-2-ol is greater than melting point of S-Butan-2-ol.

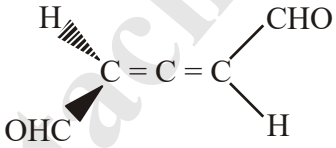
Q.13 Which of the following option is not correct ?

(A) 

&


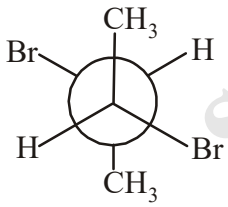
are diastereomer

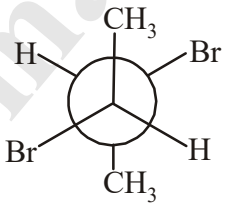
(B) 

&


are enantiomer

(C*) E-3-Bromohex-3-ene & Trans-3-bromo but-3-ene are identical compound

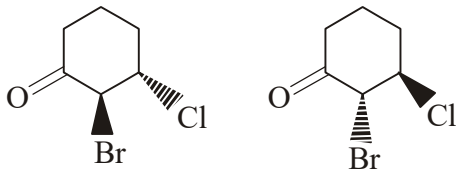
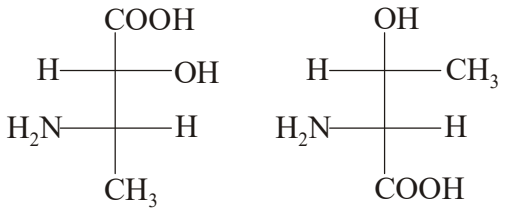
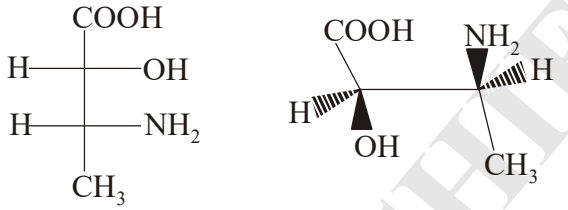
(D) 

&


are identical compound.

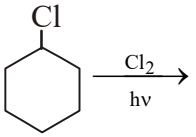
Match the column :

Q.14

	Column I (Pair of compounds)	**Column II (Relationship)**
(A)		(P) Enantiomer
(B)		(Q) Diastereomer
(C)		(R) Positional isomer
		(S) Chain isomer

[Ans.(A) P (B) R (C) Q]

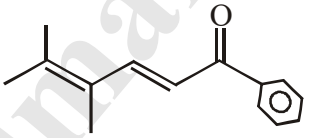
Subjective :

Q.15  number of theoritically possible dichloro derivatives

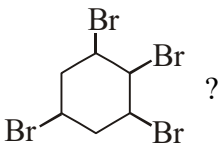
[Ans. 9]

Q.16 How many total isomers are possible from C_3H_6O and also find out the number of optically active isomers? [Ans. 11, 2]

Q.17 How many 'H' will be replace by 'D' when given compound react with $NaOD^{\ominus}/ D_2O$ for a long time.



[Ans. 7]

Q.18 How many stereoisomers are possible for  ?

[Ans. 8]