

V. P. AND R. P. T. P. SCIENCE COLLEGE  
VALLABH VIDYANAGAR  
B.Sc. (SEMESTER-III) INTERNAL TEST-2016  
SUBJECT : ORGANIC CHEMISTRY (US03CCHE01)

TIME : 03.00 p.m. to 04.30 p.m.      DATE : 03-10-2016      TOTAL MARKS : 25



**Q. 1 Choose the correct option for the following** **03**

- (i) 1 dm is equal to :  
(a) 100 cm      (b) 10 cm      (c) 0.1 cm      (d) 10 meter.
- (ii) Which of the following compound is used as an excellent humectants ?  
(a) Nitroglycerine      (b) Ethylene glycol      (c) Glycerol      (d) Picric acid.
- (iii) Which of the following compound does not give Iodoform test ?  
(a) Ethanol      (b) 2-propanol      (c) Tert.-butyl alcohol      (d) Acetophenone.

**Q. 2 ANSWER THE FOLLOWING (ANY TWO)** **04**

- (I) Staggered conformation of ethane is more stable than eclipsed conformation.
- (ii) Williamson ether synthesis is not effective with Tert.-butyl chloride.
- (iii) Phosphorus ylides are used in Wittig reaction.

**Q. 3 ANSWER THE FOLLOWING** **06**

- (I) Synthesis of chiral compound from achiral reactants always give racemic modification.
- (ii) 95 % methyl cyclohexane exist in the conformation with methyl group in the equatorial position.

**OR**

**Q.3 ANSWER THE FOLLOWING** **06**

- (i) Racemic mixture is resolvable but meso compound is not resolvable.
- (II) Arrange the relative stability order of following conformations of cyclohexane and explain your answer.  
(a) Boat      (b) Twist-boat      (c) Chair.

**Q.4 ANSWER THE FOLLOWING** **06**

- (i) Arrange the relative acidity order of following molecule and explain your answer.  
(a) Alcohol      (b) Water      (c) Ammonia.
- (ii) Give the synthesis of glycerol from propene via halohydrin formation. **(P.T.O.)**



OR

**Q.4 ANSWER THE FOLLOWING**

**06**

- (i) Give the synthesis of 3-methyl-2-pentanol from ethanol by Grignard synthetic route.
- (ii) Complete the following reaction and give appropriate detail stepwise mechanism.



**Q.5 ANSWER THE FOLLOWING**

**06**

- (i) Aromatic amines are weaker base than aliphatic amines.
- (ii) Give stepwise reaction mechanism of acetal formation.

OR

**Q.5 ANSWER THE FOLLOWING**

**06**

- (i) Give the synthesis of 2-ethyl-1-hexanol from acetaldehyde by using aldol condensation route.
- (ii) Discuss the action of nitrous acid on various aliphatic and aromatic amines.

**THE END**

*There is no short cut, except hard work with understanding to excel in examination.*