

Vitthalbhai Patel & Rajratna P. T. Patel Science College  
Vallabh Vidyanagar

B. Sc. (Semester - V)

Subject : ORGANIC CHEMISTRY (US05CCHE02)

Day : Tuesday

Internal Test – October, 2013

Marks : 30

Date : 01-10-2013

Time : 3.30 to 5.00 p.m.

Note: (i) All questions are to be attempted. (ii) Figures to the right indicate marks.

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

[6]

- (i) The formula of hydrazoic acid is .....  
(a)  $\text{HN}_2$  (b)  $\text{HN}_3$  (c)  $\text{NH}_3$  (d)  $\text{NH}_2$
- (ii)  $\alpha$ -halo ketone is converted into acid by the action of .....  
(a)  $\text{NaOH}$  (b)  $\text{NaNH}_2$  (c)  $\text{ROR}$  (d)  $\text{NaOR}$
- (iii) ..... is a CNS depressant but produces sleep.  
(a) anticonvulsant (b) sedative (c) hypnotics (d) none of these.
- (iv) In abnormal conditions the blood does not coagulate and excessive bleeding occurs is known as .....  
(a) anemia (b) haemophilia (c) bronchitis (d) none of these
- (v) The production of corticoids has been controlled by .....  
(a) DNA (b) GH (c) ACTH (d) RNA
- (vi) Oestrone was isolated by .....  
(a) Butenandt and Doisy (b) Baeyer (c) Hoffmann (d) E. Laqueur.

**Q.2 Answer the following (Attempt any three) :**

[6]

- (i) Explain : Hoffmann – Loeffler reaction fails to proceed in the dark.
- (ii) Explain : Birch reduction of toluene gives 2,5-dihydrotoluene.
- (iii) Write the structure and uses for the following drugs :  
(a) Benadryl (b) Avil.
- (iv) Write synthesis and uses of *para* aminosalicylic acid.
- (v) Give the classification of Hormons.
- (vi) Give physiological actions of testosterone.



**Q.3**

[6]

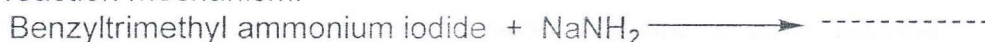
- [A] Discuss Criegee – Kasper mechanism of Baeyer – Villager oxidation reaction.
- [B] Write reaction mechanism for the conversion of Benzil to Benzylidene acid.

OR

**Q.3**

[6]

- [A] Write reaction mechanism for Mannich reaction. Also show that out of two  $-\text{CH}_2-$  groups, one is coming from formaldehyde.
- [B] Complete and re-write the following reaction. Also suggest its appropriate reaction mechanism.



Q.4

[6]

[A] Explain : Sulpha drugs are bacteriostatic but not bactericide.

[B] What is Drug ? Give the broad classification of Drugs.

OR

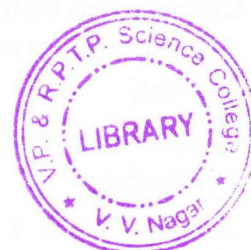
Q.4 Write synthesis for the :

[6]

(i) Drug used in the treatment of Urticaria.

(ii) Drug known as German penicillin.

(iii) Drug used as dusting powder for wounds.



Q.5

[6]

[A] Discuss Michael addition reaction.

[B] Discuss the constitution of testosterone.

OR

Q.5

[6]

[A] Discuss electrophilic addition and nucleophilic addition reactions for  $\alpha$ ,  $\beta$ -unsaturated carbonyl compounds.

[B] Discuss the constitution of Oestrone.

