Vitthalbhai Patel & Rajratna P. T. Patel Science College
Vallabh Vidyanagar
B. Sc. (Semester-V)
Subject : ORGANIC CHEMISTRY (US05CCHE02)

Date : 30-09-2016 **Internal Test – September, 2016** **Marks : 25**

Day : Friday **Time : 11.00 a.m. to 12.30 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 : **[3]**

(i) α–bromoketone is converted into ..... by the action of NaOH.
(a) ester (b) amide (c) carboxylic acid (d) amine.

(ii) Substance, which is CNS depressant but produces sleep, is known as .....
(a) anticonvulsant (b) sedative (c) hypnotics (d) none of these.

(iii) Which hormones may cause Jaundice ?
(a) testosterone (b) Oestrone (c) Cortisol (d) adrenaline.

Q.2 Answer the following (Attempt any two) : **[4]**

[A] State Perkin condensation reaction using suitable illustration.

[B] Define Drugs. What are the requirements of an ideal drugs ?

[C] Differentiate between hormones and vitamins.

Q.3 Do as directed : **[6]**

[A] Complete the following reaction, give its name and suggest appropriate reaction mechanism involved in it.

1-Bromo-4-n-propyl piperidine $\xrightarrow[\text{iii) NaOH}]{\text{i) } H_2SO_4 \text{ ii) Light}}$ ----------

[B] Discuss Beckmann rearrangement. Show that Beckmann rearrangement is highly stereospecific.

OR

Q.3 Do as directed : **[6]**

[A] Complete the following reaction, give its name and suggest appropriate reaction mechanism involved in it.

Cyclohexanone + $(Ph)_3P{=}CHPh$ $\longrightarrow$ ------

[B] Prove that in Mannich reaction, out of two $-CH_2-$ groups of a Mannich base, one of them is coming from formaldehyde.

Q.4 Write synthesis for the following : **[6]**

[A] Drug popular as German penicillin.

[B] Drug used for the treatment of cholera.

[C] Drug used as antihistamine.

OR

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Q.4 Answer the following : **[6]**

[A] Discuss the mode of action of Sulpha Drug.

[B] Give classification of Drugs.

Q.5 Answer the following : **[6]**

[A] How will you determine the presence of steroid nucleus and keto group in the structure of oestrone ?

[B] Differentiate between electrophilic addition and nucleophilic addition reaction on α, β-unsaturated carbonyl compounds.

OR

Q.5 Answer the following : **[6]**

[A] Write synthesis of testosterone from cholesterol by Ruzicka and Butenandt.

[B] Discuss Michal addition reaction with suitable illustration.

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