

(A-g) Seat No: _____

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SARDAR PATEL UNIVERSITY
B.Sc. EXAMINATION
SEMESTER - V (NC)
Organic Chemistry (US05CCHE02)

10th May

2016

10/05/2016

Organic chemistry

Maximum Marks: 70

Q-1 Choose the correct option for each of the following.

[10]

- The general formula of peracid is
(a) RCO_2H (b) RCOOH (c) RCOH (d) RCO_3H
- The intermediate of sommelet rearrangement is known as.....
(a) ylide (b) cation (c) radical (d) betaine.
- α -halo ketone is converted into acid by the action of
(a) NaOR (b) NaNH_2 (c) ROR (d) NaOH
- Sulfonamide drugs are used for the control of
(a) cocci infections (b) virus (c) fungi (d) All of these
- drug helps to reset the thermostat for normal temperature.
(a) antipyretic (b) analgesic (c) antihistamine (d) non of these
- Heparin is produced by
(a) kidney (b) Brain (c) Heart (d) Liver.
- (-) form of linalool is occurs in
(a) Rose oil (b) orange oil (c) lemongrass oil (d) camphor oil
- (5) How many isoprene units are present in limonene?
(a) 2 (b) 3 (c) 4 (d) 5
- The M. P. of testosterone is
(a) 15.5°C (b) 155°C (c) 115°C (d) 1.55°C
- Which hormones may cause Jaundice?
(a) Testosterone (b) Oestrone (c) Cortisol (d) Adrenaline

Q-2 Attempt any ten.

[20]

- Explain: Birch reduction of toluene gives 2,5-dihydrotoluene.
- How will you prepare witting reagent?
- How will you prepare per acid? Give example of peracid.
- Define Drugs. What are the requirements of an ideal drug?
- Draw the structure of Rifampin with its functions.
- Discuss the mode of action of antipyretic drugs.
- What are the chemical properties of terpenoids?
- List the methods for isolation and separation of terpenoids from the plants.
- Write the synthesis of terebic acid from ethylacetoacetate.
- Explain the terms hormones.
- Differentiate between hormones and vitamins.
- Define α , β - unsaturated carbonyls compounds and give its two examples.

①

(P.T.O)

Q-3 Attempt the following.

- (a) Discuss Crigee – Kasper mechanism of Baeyer – Villager Oxidation reaction. [05]
- (b) Write mechanism of Mannich Reaction. [05]

OR

Q-3 Attempt the following.

- (a) Complete the following reaction and suggest appropriate mechanism for it. [05]
Benzyltrimethylammoniumiodide + $\text{NaNH}_2 \longrightarrow ?$ _____
- (b) Explain: In an unsymmetrical benzils the aryl group with electron donating group migrates faster than simple aryl group. [05]

Q-4 Attempt the following.

- (a) Write the synthesis, class and uses of the following drugs. [06]
(i) Phenobarbitone (ii) PAS
- (b) Write the synthesis for the following [04]
Drug used in the treatment of urticaria.

OR

Q-4 Attempt the following.

- (a) Write the synthesis, class and uses of the following drugs. [06]
(i) Chloroquine (ii) Miracil – D
- (b) Write the synthesis for the following [04]
Drug used as dusting powder for wounds and ulcers.

Q-5 Attempt the following.

- (a) Give the importance of following reagents for the structure elucidation of terpenoids. [05]
(i) Sodium hypoiodite (ii) phenylhydrazine.
(iii) ozone (iv) H_2/pd .
- (b) Discuss the isomerism in citral. [05]

OR

Q-5 Attempt the following.

- (a) Out line synthesis for the following. [05]
Citral using 3 – methyl – 1 – butanol via Arens – Van Dorp’s synthesis.
- (b) Discuss Wallach’s oxidative degradation of α – terpeniol. [05]

Q-6 Attempt the following.

- (a) How will you determine the presence of keto group, position of phenolic (-OH) group and steroid nucleus in oestrone? Also write the Hughes et al synthesis of oestrone. [10]

OR

Q-6 Attempt the following.

- (a) Discuss electrophilic and nucleophilic addition on α, β – unsaturated carbonyl compounds with mechanism. [10]

— X —
②