PP SAVANI UNIVERSITY

Fifth Semester of B.Sc. Examination
December-2021
SSCH3090– Organic Chemistry VII

10.12.2021, Friday **Time: 12:30 PM -3:00PM** **Maximum Marks: 60**

Instructions:

1. The question paper comprises of two sections.
2. Section I and II must be attempted in separate answer sheets.
3. Make suitable assumptions and draw neat figures wherever required.
4. Use of scientific calculator is allowed.

Section-I (Total Marks - 30)

Q.1 Short Questions **(10)**

1.1 Objectives **[05]**

1.1a In photochemical reactions, wavelength of far Infrared rays is

A 10^{3}nm
B 10^{-3}nm
C 10^{-5}nm
D 10^{-9}nm

1.1b Static Quenching is due to

A Hydrogenated
B Complex formation
C Neutral reaction
D All of the above

1.1c Who was give the second law of photochemistry?

A Grotthuss-Draper
B Grotthuss-Stark
C Stark-Einstein
D None of this

1.1d Visible light's wavelength range between?

A 400nm-700nm
B 40nm-70nm
C 100nm-1000nm
D 4000nm-7000nm

1.1e Which is the form of light that can initiate a photochemical?

A Y-rays
B Z-rays
C IR light
D X-ray light

1.1f Which quenching can be used for DNA mechanical movements?

A Exciplex
B Dynamic Quenching

C Static Quenching
D Fluorescence Quenching

1.1g Number of carbon atom in Monoterpenes?
A 10
B 15
C 20
D 30

1.1h Which structure is that of isoprene?
A $H_2C=C(CH_3)-CH=CH_2$
B $CH_3-CH(CH_3)-CH=CH_2$
C $H_2C=CH-CH_2-CH=CH_2$
D $CH_3-CH=CH-CH=CH_2$

1.1i Number of isoprene units in Diterpenes?
A 20
B 15
C 25
D 10

1.1j Chemical formula of Camphor
A $C_{11}H_{16}O$
B $C_{12}H_{16}O$
C $C_{10}H_{16}O$
D $C_{13}H_{16}O$

1.2 Answer the Following: (MCQ/Short Question/Fill in the Blanks) **[5]**

1.2a Define: Photochemistry
1.2b Define: Thermal reaction
1.2c The wavelength of green color is _____nm.
1.2d Chemical reaction in which the reactants get energy as photons called _____.
1.2e There is need of Catalyst on Photochemical reaction: True/False.

Q.2 Short Notes (Attempt any two) **[06]**

A Laws of photochemistry
B Oleoresin
C Phosphorescence with Jablonski diagram

Q.3 Explain in detail (Attempt any two) **[14]**

A Explain briefly Fluorescence Quenching.
B Explain Difference between Photochemical and Thermo chemical Reactions.
C Describe Terpenoid, Classification of Terpenoids and Give the full explanation of analytical and Synthetic evidence of Citral.

Section-II (Total Marks - 30)

Q.1 Short Questions [10]

1.1 Objectives [05]

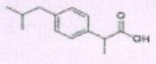
1.1a Alkyl nitrites are prepared by the reaction of alcohols with ____?

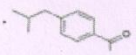
- **A** Nitric acid
- **B** Nitrous acid
- **C** Sulphuric acid
- **D** Phosphorous acid

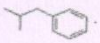
1.1b Give the similar name of Nalidixic Acid.

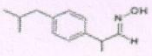
- **A** Nicotinic Acid
- **B** NegGram
- **C** Carboxylic Acid
- **D** CegGram

1.1c Which is the structure of Ibuprofen?

A 

B 

C 

D 

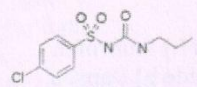
1.1d Which is used as reduce alcohol withdrawal symptoms?

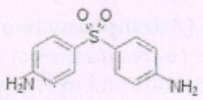
- **A** Lidocane
- **B** Chloromphenicol
- **C** Diazepam
- **D** Sulfadoxine

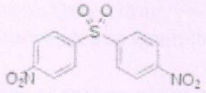
1.1e Which drug used for the treatment of non-insulin-dependent diabetes mellitus (NIDDM)

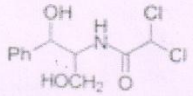
- **A** Chloropropamide
- **B** Dapsone
- **C** Lidocane
- **D** Pyrimethamine

1.1f Which is the structure of Chlorpropamide?

A 

B 

C 

D 

1.1g Molecular formula of Pyridoxin.

A $C_8H_{11}NO_3$
B $C_8H_{11}NO_2$
C $C_5H_{11}NO_3$
D $C_8H_{11}NO_4$

1.1h Thyroxine, also called

A 3,4,3′,4′-tetraiodothyronine
B 3,5,3′,4′-tetraiodothyronine
C 5,5,4′,5′-tetraiodothyronine
D 3,5,3′,5′-tetraiodothyronine

1.1i Which is the molecular formula of Lumi-lactoflavin?

A $C_{13}H_{12}N_4O_2$
B $C_{13}H_{13}N_4O_2$
C $C_{13}H_{11}N_4O_2$
D $C_{14}H_{12}N_4O_2$

1.1j Excessive secretion Hormone in the body is known as ?

A hypothyroidism
B hyperothyroidism
C hyperthyroidism
D lowerthyroidism

1.2 **Answer the Following: (MCQ/Short Question/Fill in the Blanks)** **[05]**

1.2a Definition: Vitamin

1.2b The most widely used drug classification system code is _____.

1.2c _____ is used as a cleaning agent and solvent in industrial and household applications.

1.2d Full form of ATC is _____.

1.2e Which are the deficiency diseases by Vitamin C and E.

Q.2 **Short Notes (Attempt any two)** **[06]**

A Hormones
B Vitamin A
C Drug: Pyrimethamine

Q.3 **Explain in detail (Attempt any two)** **[14]**

A Give the Synthesis route and uses of **a)** Nalidixic Acid **b)** Ibuprofen
B Give the Synthesis route and uses of **a)** Chlorpropamide **b)** Dapson
C Explain Thyroxine