PP SAVANI UNIVERSITY

Fifth Semester of B.Sc. Examination

Dec Jan 2020-21

SSCH3070– Organic Chemistry VI

31.12.2020, Thursday | Time: 10:00 AM -12:30PM | Maximum Marks: 60

Section-A (Total Marks - 20)

Q.1 Objectives (20 MCQ Compulsory-20 mark each) **(20)**

1 Green Chemistry reduces the _____ and protects the environment.
- **A** Temperature
- **B** Air
- **C** Water
- **D** Pollution

2 Which are greener than the conventional methods?
- **A** Electromagnetic waves
- **B** Ultra violet waves
- **C** Micro waves
- **D** Radio waves

3 What is the starting material for nylon 6-6?
- **A** Adipic acid
- **B** Acetic anhydride
- **C** Nitric acid
- **D** 2-methyl propyl benzene

4 In green synthesis of Acetaldehyde which catalyst can be used?
- **A** Ni/Co
- **B** Pd/Cu
- **C** Ni/Cu
- **D** Pd/Co

5 Which Product obtained by the dehydration of sugars?
- **A** Catechol
- **B** Citral
- **C** Furan
- **D** Furfural

6 Catechol is synthesized by hydroxylation of?
- **A** Alcohol
- **B** Acetone
- **C** Phenol
- **D** Benzene

7 The chemical formula of Methyl methacrylate is?
- **A** $CH_2=C(CH_3)COOCH_3$
- **B** $CH_3=C(CH_3)COOCH_2$
- **C** $CH_2=C(CH_3)COOCH_2$
- **D** $CH_2=C(CH_3)COOCH_4$

8 Which product obtained by bromination of toluene under conditions suitable for a free radical halogenation?
- **A** Benzyl chloride
- **B** Benzyl bromide
- **C** Ethyl bromide
- **D** Phenyl dibromide

9 Hofmann elimination is an elimination reaction of?
- **A** Nitrogen
- **B** Methyl
- **C** Amine
- **D** Ketone

10 Which are is known and famous for its explosive properties?

A Amine
B Ether
C Benzaldehyde
D Nitroglycerin

11 In Heterocyclic compound which prefix used for Sulfur?

A Aza
B Sulpha
C Bora
D Thia

12 Heterocyclic compounds are in which structure?

A Hexagonal
B Planner
C Tetragonal
D Triangle

13 In Benzene ring having how many Pi- bond?

A 6
B 3
C 5
D 4

14 Which is the molecular formula of Pyrrole?

A C_4H_5N
B C_3H_4O
C C_4H_4N
D C_3H_5O

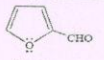
15 Which carbon-nitrogen bonds length in Pyridine?

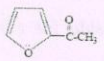
A 1.37 Å
B 0.30 Å
C 2.37 Å
D 5.37 Å

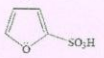
16 Name the reaction dehydration of 1,4- diketone with P_2S_5 (phosphorous Pentasulphide) gives derivatives of thiophene

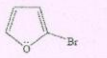
A Pall-Knorr synthesis
B Oxidation
C Nitration
D Hantzsch Synthesis

17 When furan is treated with a mixture of HCN and HCl in the presence of Lewis acid catalyst $AlCl_3$ we get _____?

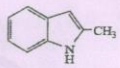
A 

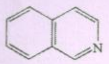
B 

C 

D 

18 Which is the structure of Indole?

A 

B 

C 

D 

19 In presence of KMnO4 quinoline get oxidized to pyridine-2,3- dicarboxylic acid which on decarboxylation gives _____?

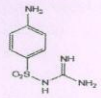
A Pamitic Acid
B Acetic Acid
C Benzoic Acid
D Nicotinic Acid

20 Which is the structure of Sulphaguanidine?

A 

B 

C 

D 

Section-B (Total Marks - 40)

Q.1 Short Notes (attempt all four compulsory- 3 marks each) **(12)**

A Green Synthesis : Adipic Acid

B Microwave assisted reactions in water : From Benzamide to Benzoic acid

C Synthesis and uses of sulphonamides

D Synthesis Nicotinic acid from Quinoline

Q.2 Explain in detail (attempt any four -7 marks each) **(28)**

A What is Green Chemistry? Explain Twelfth Principal of Green Chemistry.

B Give the Microwave assisted reaction in solvents of following Compound.
a) Fries Rearrangement **b)** Claisen Rearrangement

C Explain methods of preparation and Electrophilic Substitution Reactions of Furan.

D Explain Synthesis and Uses of Indole by **a)** The Fisher-Indole **b)** The Madelung route.

E Green Synthesis and uses of **a)** Paracetamol **b)** Benzyl Bromide