Sanjay Ghodawat University, Kolhapur

2020-21

Established as State Private University under Govt. of Maharashtra. Act No XL, 2017

EXM/P/09/00

Year and Program: 2020-21, S.Y. B.Sc.	**School of Science**	**Department: Chemistry**
Course Code: CHS204	**Course Title: Green Methods In Chemistry**	**Semester :IV (Summer 2021)**
Day and Date:	**Re-End Semester Examination**	**Time : 2 Hrs.** **Max Marks : 50**

Instructions: 1) All Questions are compulsory.
2) Draw neat and systematic diagrams wherever necessary

		Marks	Bloom's Level	CO
Q.1	**Answer the following (any Two)**–			
a)	Define Green Chemistry. Explain with case studies about any two principles.	8	L1	CO1
b)	Which are the seven aspects that are addressed by 12 principles of Green Chemistry? List the benefits of Green Chemistry.	8	L1	CO1
c)	What happened in 1984 in Bhopal? Take an overview of top 5 industries for chemical related accidents in 2008.	8	L2	CO1
Q.2	**Answer the following (any two)-**			
a)	Explain How pKa and skin irritation are related? Predict the skin irritation for nicotine and imipramine.	8	L3	CO2
b)	Urea is prepared from ammonia and carbon dioxide. Write the balanced reaction. If 637.2 g of NH_3 reacts with 1142 g of CO_2, • What is limiting reagent? • What is theoretical yield of urea in g? • How much reactant will be leftover in g?	8	L3	CO2
c)	Elaborate any one award winning Presidential Green chemistry challenge with focus on area, traditional chemistry and Green Chemistry involved.	8	L1	CO2
Q.3	**Answer the following (any two) -**			
a)	Write the reaction and their mechanism of Adipic Acid, Catechol, Hofmann Elimination and write down detail Synthesis of benzoic acid from methyl benzoate.	9	L2	CO2
b)	i) What are solvents? What is chemistry involved in use of solvents? Give their chemical classification. (6 Marks) ii) According to Pfizer solvent selection table Pentane is considered as undesirable solvent for use. Why? Give strategies and approaches	9	L2	CO3

to solvent replacement in chemistry. (3 Marks)

c)	i) What are ionic liquids? Give examples. What makes ionic liquids unique? (6 Marks) ii) What are next generation ionic liquids? Give two examples with chemical structures (3 Marks)	9	L3	CO1

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