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	School of Science	Department: Chemistry
Course Code: CHS507	Course Title: Analytical Chemistry	Semester : Odd (I)
Day and Date:	End Semester Examination	Time : 2 Hrs. Max Marks : 50

Instructions: 1) All Questions are compulsory.

		Marks	Bloom's Level	CO
Q.1	**Answer the following questions**			
a)	i) Define the term error and discuss in detail various types of errors.	4	L1	CO1
	ii) Calculate the standard deviation for following observations of an analyte.	4	L4	CO1

Sr. No.	1	2	3	4	5	6	7	8
Observations (ml)	34.4	34.5	34.2	34.3	34.1	34.8	34.9	34.7

b)	Write the principle of HPLC and GC. Give the comparative account of HPLC and GC.	8	L3	CO2
	OR			
c)	Explain in detail refractive index detector in HPLC and give its advantages.	8	L3	CO2
Q.2	**Answer the following questions**			
a)	Discuss in detail, various modes of vibrations in IR spectroscopy.	8	L2	CO3
b)	Describe the instrumentation of IR spectroscopy with suitable schematic diagram.	8	L3	CO3
	OR			
c)	State and explain Beer-Lamberts law. Give an account of applications of UV-visible spectroscopy	8	L3	CO3
Q.3	**Answer the following questions**			
a)	Explain in detail use of adsorption indicators in precipitation titrations.	9	L2	CO4
b)	Discuss the applications of iodine as a redox reagent.	9	L4	CO4

OR

c)	Give an account of stepwise and overall formation constant and write the applications of complexometric titrations.	9	L4	CO4

*****