Sanjay Ghodawat University, Kolhapur

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

EXM/P/09/00

Year and Program: 2020-21 TY. BSc (Science)	**School of Science**	**Department: Chemistry**
Course Code: CHS305	**Course Title: Analytical Methods in Chemistry**	**Semester : V**
Day : Saturday Date : 19.12.2020	**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 (any Two)**			
	a)	When an object is weighed 5 times, the following values are obtained Weight (g) 0.1015 0.1030 0.1005 0.1020 0.1010 Calculate the mean, standard deviation, variance and coefficient of variance.	8	L2	CO1
	b)	Write short note Beer's-Lambert's law and explain applications of UV spectroscopy in detail with proper example.	8	L2	CO1
	c)	Explain principle of IR spectroscopy and explain with the help of neat diagram Fourier transform infrared spectroscopy (FTIR) instrument in detail.	8	L2	CO2
Q.2		**Answer the following (any two)**			
	a)	How the chemical and ionization interference occurs and how it is prevented in atomic absorption spectroscopic determination. Explain in brief what are the basic components of Atomic absorption spectrometer?	8	L3	CO2
	b)	Describe in detail principle, theory and instrumentation technique of thermogravimetry.	8	L4	CO3
	c)	Explain in brief potentiometric titrations.	8	L3	CO4

Q.3 Answer the following (any two)

a)	Describe in brief batch extraction and continuous extractions techniques in solvent extraction methods.	9	L2	CO3
b)	Write principle of chromatography. Discuss in detail adsorption and partition chromatography methods of separation.	9	L2	CO4
c)	Classify chromatography techniques. Write a note on ion exchange chromatography.	9	L1	CO4

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