647510 **MSCanaCC1040** **Seat No :_____**

M.Sc.(Chem.) Semester - 1 (*CBCS*) Examination
Oct/Nov. -2019 - [NEW COURSE]
ANALYTICAL CHEMISTRY (CORE)

Time: 2:30 Hours **Marks: 70**

Instructions:

1. All questions are compulsory.
2. Figures to the right indicate.

Q1 (A)	**Answer the following question**	**04**
1	Explain the difference between very soluble, soluble, sparingly soluble and insoluble compounds.	
Q1 (B)	**Answer any two questions out of three**	**10**
1	Give the structure, molecular weight and empirical formula for salicylic acid; explain preparation of 50 mM salicylic acid in water?	
2	Define the term Parts per million (PPM) and explain how do you prepare 50 ppm 150 mL Rifampicin in methanol.	
3	Explain the term Mole and find out the numbers of moles present in 196 gm H_2SO_4.	
Q2 (A)	**Answer the following question**	**04**
1	Give the introduction and classification of sampling techniques.	
Q2 (B)	**Answer any two questions out of three**	**10**
1	What is calibration? Explain range of calibration and range of instrument.	
2	Explain classification of Analytical methods with example.	
3	Write the procedure for calibration of pH meter.	
Q3 (A)	**Answer the following question**	**04**
1	Give an account of Mohr's method.	
Q3 (B)	**Answer any two questions out of three**	**10**
1	Write a note on Acid – Base theories.	
2	Give the classification of volumetric titrations and indicators with suitable example.	
3	Write a note on Fajan's method for chloride determination.	
Q4 (A)	**Answer the following question**	**04**
1	Give an account of Thermosphere.	
Q4 (B)	**Answer any two questions out of three**	**10**
1	Define Air pollution and explain various types of Air pollutants.	
2	Give ISI specifications of drinking water.	
3	Discuss classification of water pollutants.	
Q5 (A)	**Answer the following question**	**04**
1	Explain methods for analysis of Iron in water.	
Q5 (B)	**Answer any two questions out of three**	**10**
1	Discuss modified West Geak method for analysis of SO_x in air.	
2	Discuss adverse affects of excess Fluoride intake and explain any method for estimation of Fluoride in water.	
3	Explain various methods for analysis of H_2S in air.	

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