

M.Sc.(Chem.) Semester - 2 (CBCS) Examination
March/April -2019 (Old Course)
ANALYTICAL CHEMISTRY (CORE)

Time: 2:30 Hours

Marks: 70

Instructions:

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

Q.1 Answer any seven of the following ten questions.**[14 Marks]**

1. Define the following terms: (a) Accuracy (b) Precision
2. Enlist limitations of microwave assisted reaction.
3. What are the effects of ozone layer depletion?
4. Explain ionic liquids with suitable example.
5. Briefly explain the role of Rhizobium bacteria.
6. Enlist analytical method validation parameters.
7. Give brief account of air pollution and enlist sources of air pollution.
8. Explain classification of pollution and pollutants in environment.
9. Briefly explain phase transfer catalyst with example.
10. Define standard deviation and give equation to calculate standard deviation.

Q.2 Answer any two of the following three questions.**[14 Marks]**

1. Discuss EL-Nino and LA-Nina Phenomena.
2. Enlist basic twelve principles of green chemistry and explain its role in day to day life.
3. Explain student t - test in detail with example.

Q.3 Answer the following questions.**[14 Marks]**

1. Explain various methods to estimate iron present in water.
2. Calculate the co-relation co-efficient (r) for following five sets.

Xi	100	200	300	400	500
Yi	1012	2133	3149	4035	5051

OR**Q.3 Answer the following questions.****[14 Marks]**

1. Explain estimation of Nitrate (NO_3^-) and Nitrite (NO_2^-) in detail.
2. Calculate mean and standard deviation for following six replicate observations.

Set	1	2	3	4	5	6
Observation	1349	1241	1213	1324	1310	1298

Q.4 Answer the following questions.**[14 Marks]**

1. Explain atom economy with suitable example.
2. Give an account of soil pollution.

Q.5 Answer any two of the following four questions.**[14 Marks]**

1. What is air pollution? Discuss effects of air pollution in detail.
2. Write a note on Greenhouse effect.
3. Explain mechanism of ozone layer depletion.
4. Write a note on Linearity study.
