(AUTONOMOUS)

**BSc DEGREE EXAMINATION MAY 2018**

(First Semester)

Branch – **CHEMISTRY**

## ANALYTICAL CHEMISTRY

Time : Three Hours Maximum : 75 Marks

### SECTION-A (20 Marks)

Answer **ALL** questions

**ALL** questions carry **EQUAL** marks (10 x 2 = 20)

1 Write the threshold limit value of acetone and carbondioxide.
2 Give the handling procedure for carcinogenic chemicals.
3 Write the spot test for $Ni^{2+}$ ion.
4 Give an example for complexation reaction.
5 Define: Molarity.
6 What is an indicator? Give an example.
7 What are sequestering agents? Give an example.
8 What are chelating precipitants? Give two examples.
9 What do you mean by vaccum distillation?
10 How is boiling point used as a test for purity?

### SECTION - B (25 Marks)

Answer **ALL** Questions

**ALL** Questions Carry **EQUAL** Marks (5 x 5 = 25)

11 a Write short notes on the temperature and volumetric glassware.

OR

b Describe the waste disposal in the laboratory.

12 a Write a note on washing of precipitates.

OR

b Give the procedures for the removal of any two interfacing radicals from a inorganic mixture.

13 a What are the characteristics of Primary standard solution?

OR

b Discuss the principle and theory involved in redox titration.

14 a Explain post-precipitation and co-precipitation with suitable examples.

OR

b What are the advantages and disadvantages of using organic precipitants?

15 a Explain the azeotropic distillation method with suitable example.

OR

b What do you mean by desiccant? Discuss the types of desiccants.

### SECTION - C (30 Marks)

Answer any **THREE** Questions

**ALL** Questions Carry **EQUAL** Marks (3 x 10 = 30)

16 a) Describe the safe limits of vapour concentration in the laboratory.
b) Explain the advantage of using standard joint apparatus.

17 Write a note on the various types of reactions involved in qualitative analysis.

18 Explain the theory of acid-base indicators.

19 Discuss the principle, theory and estimation of nicked by gravinetic method.

20 Describe the theory of distillation.

Z-Z-Z END