PSG COLLEGE OF ARTS & SCIENCE
(AUTONOMOUS) •.)4C-Hy OJ2

BSc DEGREE EXAMINATION MAY 2017
(First Semester) •

Branch - **CHEMISTRY**

ANALYTICAL CHEMISTRY

Time : Three Hours Maximum : 75 Marks

SECTION-A (20 Marks)

" Answer **ALL** questions
ALL questions carry **EQUAL** marks (10x2 = 20)

1 How do you test for cleanliness?
2 What way fumes are disposed in the lab?
3 Write the spot test reagents for aluminium and magnesium ions. • , •
4 What is oxidation - reduction reaction? Give an example. .
5 Distinguish between end point and equivalence point.
6 Write the indicators for the following
. (a) HC1 Vs NaOH (b) $FeS0_4$ Vs $KMno_4$.
7 . What is Occlusion?
8 Write the uses of crucible.
9 Whatis Vacuum distillation?
10 Whatdo you mean by desiccants?

SECTION - B (25 Marks)

Answer **ALL** Questions
ALL Questions Carry **EQUAL** Marks (5x5 = 25)

11 a What are the general precautions to be taken to avoid lab accidents? .
OR
b Discuss the advantages of using standard joint apparatus.

12 a What are the precautions to be taken during filtration?
OR .
b Explain the procedure for the removal of borate and oxalate ions from the mixture.

13 • a Define the following (i) Normality (ii) Molarity.
OR
b Discus the estimation of Ag+ ion using precipitation titration.

14 a Write a note on sequestering agents.
OR
b Explain the precipitation from homogeneous solution. Give an example.

15 a Write a note on drying of solids.'
OR
b Explain azeotropic distillation.

SECTION - C (30 Marks)

Answer any **THREE** Questions
ALL Questions Carry **EQUAL** Marks (3 x 10 =-30)

16 a Discuss the laboratory safety measures in detail. (6)
b Describe the possibility of Hazards in the laboratory. (4)

17 Discus the applications of common ion effect in semi micro qualitative analysis.

18 Discuss the EDTA titrations with Zn^{2+} and Ni^{2+} ions.

19 Describe the principles and explain the estimation of lead gravimetrically.

7ft **Write a note on the** following (a) **Theory** of distillation (b) Sublimation.