

**PSG COLLEGE OF ARTS & SCIENCE**  
(AUTONOMOUS)

**MSc DEGREE EXAMINATION MAY 2018**  
(Second Semester)

Branch – ENVIRONMENTAL SCIENCE

**INSTRUMENTAL METHODS OF ANALYSIS**

Time : Three Hours

Maximum : 75 Marks

Answer **ALL** questions  
**ALL** questions carry **EQUAL** marks (5 x 15 = 75)

- 1 a Give a detailed account on voltammetry and polarography. (15)  
OR
- b Describe the basic principle and instrumentation of conductometry. (10)
- c Write a short note on Coulometry. (5)
- 2 a Explain the principle and instrumentation of FTIR with a neat labelled diagram. (15)  
OR
- b Write a note on UV visible spectrophotometer. (7)
- c Explain the principle and instrumentation of Atomic Absorption Spectrophotometer. (8)
- 3 a Explain in detail working principle and environmental applications of mass spectrometer. (15)  
OR
- b Write on X-Ray Fluorescence. (8)
- c What is nephelometer? State its applications. (7)
- 4 a Discuss the principle, instrumentation and applications of HPLC. (15)  
OR
- b Define electrophoresis. What are the factors affecting the electrophoretic mobility of sample? (10)
- c How paper chromatograph works? (5)
- 5 a What are central measures of tendency? Mention their features. (15)  
OR
- b What is Correlation? Explain the types of correlation coefficients. (10)
- c Give a short note on dispersion. (5)

Z-Z-Z

END