

PARUL UNIVERSITY
FACULTY OF APPLIED SCIENCE
M.Sc.Summer 2018-19 Examination

Semester: 2
Subject Code: 11205154
Subject: Analytical Chemistry II

Date:08/04/2019
Time:10:30 am to 01:00pm
Total Marks: 60

Instructions:

1. All questions are compulsory.
2. Figures to the right indicate full marks.
3. Make suitable assumptions wherever necessary.
4. Start new question on new page.

- Q.1. A) Answer the Following (4x2) (Each of 04 marks) (08)**
 (a) Short note on GLP Principles.
 (b) Write Difference between Quality Assurance & Quality Control.
- Q.1. B) Answer the following questions (Any two) (04)**
 (a) Write Short answers (Each of 02 marks) (04)
 1. Define Mean & Mode
 2. Define Standard deviation & Variance
 (b) Write Difference between Accuracy & Precision (04)
 (c) Short note on different types of Ion Sources (04)
- Q.2. A) Answer the following questions. (04)**
 (a) Write Short Answers (Each of 02 marks) (04)
 1. Define base peak and molecular ion peak.
 2. Differentiate LC-MS and GC-MS
 (b) Write Applications of Mass Spectrometry. (04)
- Q.2. B) Answer the following questions (Any two) (03)**
 (a) Multiple choice questions (Each of 01 marks) (03)
 1. A chance variation in an Observational Process is -----
 a) Dispersion b) Random error c) Instrument error d) Measurement error
 2. The vibrations, without a centre of symmetry are active in which of the following region?
 a) Infrared but inactive in Raman b) Raman but active inactive in Infrared c) Raman & IR
 d) Inactive in Raman & IR
 3. In which state of matter mass spectroscopy is being performed?
 a) Solid b) Liquid c) Gaseous d) Plasma
 (b) Short note on Detectors of Mass Spectrometry (03)
 (c) Explain the Characteristics of Microwave Spectroscopy (03)
- Q.3. A) Answer the following (Each of 04 marks) (08)**
 (a) Explain Instrumentation of Microwave Spectroscopy
 (b) Explain types of Energies associated with molecules in Molecular Spectroscopy.
- Q.3. B) Answer the following questions (Any two) (04)**
 (a) Write Short Answers (Each of 02 marks) (04)
 1. Define Fermi Resonance.
 2. Define IR Spectroscopy.
 (b) Short note on Applications of FTIR Spectroscopy. (04)
 (c) Difference between Raman Spectroscopy & IR Spectroscopy. (04)
- Q.4. A) Answer the following questions. (04)**
 (a) Write Short Answers (Each of 02 marks) (04)
 1. Define BOD
 2. Define Dissolved Oxygen.
 (b) Differentiate between Insecticides & Pesticides. (04)
- Q.4. B) Answer the following questions (Any two) (03)**
 (a) Multiple choice questions (Each of 01 marks) (03)
 1. Gas leaked during Bhopal tragedy was-----
 a) Methyl Isocyanate b) Sodium Isothiocyanate c) Silver Nitrate d) Carbon Dioxide
 2. The full form of COD is -----
 a) Cash on Delivery b) Chemical Oxygen Demand c) Collect on Delivery d) Call off Duty

3. Spectroscopy deals with interaction of -----with matter.

a) Sunlight b) Electromagnetic Radiation c) Oxygen d) Carbon

(b) Short note on PAN

(03)

(c) Short note on Green house effect

(03)