

Roll No.

Total No. of Pages : 02

Total No. of Questions : 09

B.Sc. Agriculture (2014 & Onwards) (Sem.-7)
ANALYTICAL TECHNIQUES IN SOILS, PLANT,
FERTILIZERS AND WATER
Subject Code : BSAG-CS 702
Paper ID : [74829]

Time : 3 Hrs.

Max. Marks : 60

INSTRUCTIONS TO CANDIDATES :

1. SECTION-A is COMPULSORY consisting of TEN questions carrying TWO marks each.
2. SECTION-B contains FIVE questions carrying FIVE marks each and students have to attempt any FOUR questions.
3. SECTION-C contains THREE questions carrying TEN marks each and students have to attempt any TWO questions.

SECTION-A

Q1. Answer briefly :

- (a) Radio isotopes
- (b) Sodium absorption ratio
- (c) Cation exchange capacity
- (d) Adsorption of nutrient in soil
- (e) Terms and conditions for storage of radioactive material
- (f) Iso-morphous substitution
- (g) Half life of carbon
- (h) Radioactive materials
- (i) Mass Spectrometry
- (j) Anion exchange

SECTION-B

- Q2. Elaborate uses X-ray diffraction instrument.
- Q3. Relation between half life and decay constant for carbon atom.
- Q4. Describe principles of spectrometry in visible region.
- Q5. Uses of spectrometry in infra red (IR) region.
- Q6. Elaborate the benefits of dilution radio isotopes technique.

SECTION-C

- Q7. Explain principle, working and uses of inductively coupled plasma (ICP) spectrometer in estimation of elemental content.
- Q8. Explain in detail the uses of chromatography in agriculture and allied fields.
- Q9. Explain establishment of soil, water and plant testing laboratory.