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) Adsortion 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 defraction 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.