Roll No. ☐☐☐☐☐☐☐☐☐☐☐   Total No. of Pages : 02

Total No. of Questions : 09

B.Sc. (Agriculture)   (Sem.–7)
CROP EXPERIMENTATION
Subject Code : BSAG-PGB-705
M.Code : 77101

Time : 3 Hrs.   Max. Marks : 30

INSTRUCTIONS TO CANDIDATES :

1. SECTION-A is COMPULSORY consisting of TEN questions carrying ONE mark each.
2. SECTION-B contains FIVE questions carrying $2\frac{1}{2}$ (Two and Half) marks each and students have to attempt any FOUR questions.
3. SECTION-C contains THREE questions carrying FIVE marks each and students have to attempt any TWO questions.

SECTION-A

Ql. Write short notes on :

  a) ANOVA

  b) Replication

  c) Blocking

  d) Principles of experimental design

  e) G x E

  f) Adaptive trials

  g) Local control

  h) Degree of freedom

  i) Maximum likelihood

  j) Coefficient of Variation

SECTION-B

Differentiate between the following with suitable examples :

Q2. Completely Randomized Design *vs.* Randomized Block Design

Q3. Simple Lattice Design *vs.* Augmented Design

Q4. Analysis of Variance *vs.* Analysis of Co Variance

Q5. Factor Analysis *vs.* Cluster Analysis

Q6. Uniformity Trials *vs.* Progeny Row Trials

SECTION-C

Q7. What is $G \times E$ interactions? What are different approaches for estimation of G x E interactions? Explain Principal Component Analysis (PCA) in detail with suitable example.

Q8. An experiment was carried out to compare four wheat varieties (A, B, C and D). A completely randomized design was used, each variety being assigned to five plots. Table below shows the field plan together with the plot yields (kg/plot). Estimate ANOVA.

A 22.2	D 23.9	B 24 .1	D 21.7	C 25.9
C 18.4	D 24.8	D 28.2	A 17.3	D 26.4
A 21.2	B 30.3	C 23.2	C 21.9	B 27.4
A 25.2	B 26.4	A 16.1	C 22.6	B 34.8

Q9. What are Compact Family Block Designs and their various types, merits and demerits?

NOTE : Disclosure of Identity by writing Mobile No. or Making of passing request on any page of Answer Sheet will lead to UMC against the Student.