B.Sc.(Ag.) Honours Semester– VII Examination, 2014

Course No. : AGR-EL–1 (Advanced Agronomy)

(Old Syllabus)

Signature of Centre Superintendent

Roll No.: (in figure)_____ (in words)_____

Student Index No._____ Regn. No._____ of_____

Time : Two hours **Full marks : 50**

Questions are of value as indicated in the margin

Part–I

(Objective and Short Answer Type)
(Use only ball point pen)

Time : 30 minutes **Full marks : 20**

Note : 1. Answer in question paper itself.
2. Striking, rewriting and overwriting are not allowed in the objective type questions.

1. Write True (T) or False (F) on the following statesman (*any five*): 1×5=5

(i) Allelopathy is one kind of competition ☐

(ii) Farming system is one of the important components of cropping system ☐

(iii) LER value of 1.0 indicates yield advantage in inter cropping system ☐

(iv) RYT is used for assessing yield advantages only in the replacement series ☐

(v) Leaf area index is equal to leaf area/leaf weight ☐

(vi) The PDFSR is located at Modipuram ☐

(vii) Harvest index is expressed as grain yield/straw yield ☐

2. Fill in the blanks with most appropriate words (*any five*): 1×5=5

(i) When deep rooted and shallow rooted crops are intercropped annidation occurs in _____.

(ii) The concept of growth analysis was first given by _____.

(iii) Growing two or more crops on the same piece of land in one calendar year is known as _____.

(iv) The practice of taking second crop from the stubbles of previous crop is known as _____.

(v) Relative growth rate is NAR× _____.

(vi) Broadcasting of succeeding crop in the standing preceeding crop before harvest is known as _____.

(vii) In sequential cropping the crop intensification ocurs in _____ dimension.

3. Tick (√) the correct alternatives (*any five*): 1×5=5

(i) Mixed croping refers to raising

(a) crops and livestock together (b) crops in different seasons (c) two or three crops of one season but of dissimilar input requirement (d) two or three crops of one season of similar input requirements

(ii) The best example of multistoried cropping is

(a) Coconut-cocoa-green fodder crop (b) Arhar-moong (c) Cardamum and Pepper in arecanut plantations (d) Flower nurseris in perrenial orchard

(iii) The scientist who conceived the idea of relay cropping is

(a) Dr. N.S. Randhawa (b) Dr. S.S. Bains (c) Dr. R.B.L. Bharadwaj (d) Dr. Rajat De

(iv) The cropping intensity of rice-potato-sesame cropping system is

(a) 300% (b) 200% (c) 50% (d) 350%

(v) Cropping under adverse weather condition is known as

(a) intercropping (b) mixed cropping (c) relay cropping (d) contingent cropping

(vi) The concept of LAI was first proposed by

(a) Fleming (b) Watson (c) Black man (d) Mc Gilchrist

(vii) The Largest area in India is covered by

(a) Rice-potato (b) Rice-wheat (c) Maize wheat (d) Rice-yellow sarson

4. Write the definition of the following (*any five*): 1×5=5

i) Aggressivity

ii) Net assimilation rate

iii) Crop growth rate

iv) Cropping system

v) Multiple cropping index

vi) Annidation

vii) Light interception ratio

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Part–II

(Descriptive Type)

Time : 1.5 Hours **Full marks : 30**

Questions are of value as indicated in the margin.

Answer ***any three*** questions.

5. Define growth. How does it differ from development? What is crop growth analysis? What are the major crop growth parameters considered for agronomic study? Define any two of these and discuss how can productivity be increased by manipulating these parameters. 1+1.5+1+1.5+5=10

6. What do you mean by Farming system? How does it differ from cropping system? Describe in brief different types of intercropping. Discuss about the adantages and limitations of mixed cropping. 1+1+3+5=10

7. What is crop rotation? Briefly discuss the advantages of crop rotation. Define multiple cropping. Briefly highlight various kinds of interference which occur in multiple cropping system. Discuss about the factors in determining cropping system in a farm. 1+1.5+1+4+2.5=10

8. Write short notes on ***any four*** of the following: 2.5×4=10
   (i) Land Equivalent Ratio (LER)
   (ii) Allelopathy
   (iii) Cultivated Land Utilization Index
   (iv) Relative Crowding Coefficient (RCC)
   (v) Competition Index
   (vi) Crop Equivalent Yield (CEY)

9. Write the difference between (***any four***): 2.5×4=10
   (i) C_3 plant and C_4 plant
   (ii) Physiological maturity and harvest maturity
   (iii) *Paira* cropping and ratoonig
   (iv) Cropping intensity and rotational intensity
   (v) Leaf area index and leaf area ratio
   (vi) Harvest index and Gram filling efficiency