B.Sc. (Ag.) Honours Semester-I Examination, 2018

Course No: AGR-112 (Old)

(Principles of Agronomy and Agricultural Meteorology)

Signature of Centre Superintendent

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

Student Index No. _____ Regn. No. _____ of _____

Time : Two Hours **Full marks : 40**

Questions are of value as indicated in the margin

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

Time : 20 minutes **Full marks : 10**

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

1. **State True (T) or False (F) in respect of the following statements(*any five*):** 5×0.5=2.5

   a) The type of fruit in mustard is known as siliqua. ☐

   b) Groundnut is a leguminous oil seed crop. ☐

   c) CO_2 gas is also responsible for global warming. ☐

   d) Anemometer is used for estimation of wind direction. ☐

   e) Indian rainfall is orographic in nature. ☐

   f) Ca and Zn both are secondary nutrients. ☐

   g) Today's climate is very pleasant. ☐

2. **Fill up the blanks with most appropriate words (*any five*)**: 5×1.0=5.0

   a) The origin of the term 'Agriculture' is in language of _____.

   b) Di-ammonium phosphate (DAP) contains _____% N.

   c) The term criteria of essentiality of plant nutrients was given by _____.

   d) Harvest maturity comes _____ days after physiological maturity.

   e) Maximum rain fall in India is caused by _____ monsoon.

   f) The value of solar constant is _____ cal/cm^2/min.

   g) International Rice Research Institution is located at _____.

3. **Underline the correct alternative (*any five*)**: 5×0.5=2.5

   a) The discipline Agronomy deals with crop improvement / crop protection / crop management / crop and soil management.

   b) Example of plantation crop is rice / sugarcane / tea / maize.

c) For a plant growth, there are maximum, minimum and optimum temperature points. This is known as temperature limits / temperature extremes / cardinal temperatures.

d) In low land rice, suitable biofertilizer is Azolla / Azotobacter / Rhizobium / Azospirillum.

e) Most common N-fertilizer is DAP / MOP / Urea / Ammonium sulphate.

f) Hail and thunderstorms takes place in cumulus / alto-cumulus / cumulo-nimbus / alto-stratus cloud.

g) Which of the following is a secondary tillage operation?

Hoeing / harrowing / disking / deep ploughing

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Part - II

(Descriptive Type)

Time : 100 Minutes **Full marks : 30**

Questions are of value as indicated in the margin

Answer *any four* questions.

4. Define tillage and tilth. What are the objectives of tillage? Write down the advantages of conservation tillage. 2+3+2.5=7.5

5. a) Define weather and climate. Write the name of different types of weather elements.
   b) Define atmosphere. Briefly describe the structure of atmosphere and the main characteristics of each layer. (2+1.5)+(1+3)=7.5

6. Define weather forecasting. Write different types of weather forecasts and their application in agriculture. Classify the different genera of clouds according to international classification. 1+4.5+2=7.5

7. a) Classify essential elements for plant growth and mention their plant available forms.
   b) Classify field crops according to growing seasons and ontogeny with suitable examples. 4+3.5=7.5

8. a) Define precipitation and condensation. Write the favourable conditions for dew formation.
   b) What is bio-fertilizer? Classify different type of bio-fertilizers. Classify nitrogenous fertilizers on the basis of chemical form of N. (2+1.5)+(1+1.5+1.5)=7.5

9. a) Define cropping pattern. Differentiate between intercropping and mixed cropping.
   b) Briefly describe the different agroclimatic zones of West Bengal. (1+2)+4.5=7

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