

**KERALA AGRICULTURAL UNIVERSITY**  
**B.Sc. (Hons.) Agriculture - 2008 Admission - 1st Semester**  
**Final Examination - March/April 2009**

**Title : Agro 1102**  
**Course: Principles of Agronomy (1+1)**

**Max. marks: 80**  
**Time : 3 hours**

**I. Answer the following**

**20X0.5=10**

**A. Fill up the blanks**

- 1) Meaning of 'agros' and 'nomos' are \_\_\_\_\_
- 2) The main objective of tillage is \_\_\_\_\_
- 3) \_\_\_\_\_ is the result of tillage.
- 4) \_\_\_\_\_ is an example for edible oil seed.
- 5) Castor belongs to \_\_\_\_\_ family.
- 6) Seeds of some plant species do not germinate even under favourable conditions are said to be \_\_\_\_\_
- 7) Plant height increases with increase in plant population due to competition for \_\_\_\_\_
- 8) The symbiotic bacteria found in the roots of pulse crop is \_\_\_\_\_
- 9) \_\_\_\_\_ is an example of complex fertilizers.
- 10) Single super phosphate contains \_\_\_\_\_ % phosphorus.

**B. Match the following**

- |                  |              |
|------------------|--------------|
| 1) Cruciferae    | a) Jute      |
| 2) Poaceae       | b) Cabbage   |
| 3) Tiliaceae     | c) Sugarcane |
| 4) Euphorbiaceae | d) Onion     |
| 5) Aliaceae      | e) Tapioca   |

**C. State True or False**

- 1) The N content of urea is 26%.
- 2) Agronomy deals with principles and practices of crop production.
- 3) Selecting setts from bottom portion of sugarcane is ideal for planting.
- 4) Dibbling is a method of sowing.
- 5) Wooden Plough is a primary tillage implement.

**II. Define the following**

**1x10=10**

- 1) Arable crop
- 2) Cash crop
- 3) Cole crop
- 4) Commercial crop
- 5) Cover crop
- 6) Exhaustive crop
- 7) Mulch crop
- 8) Energy crop
- 9) Truck crop
- 10) Ware house crop

**III. Answer the following (ANY TEN)**

10X2=20

- 1) Write a note on the scope of agronomy?
- 2) Calculate the quantity of single super phosphate needed to apply 75 kg  $P_2O_5$ /ha to maize crop.
- 3) When nitrogen fertilizers should be applied to the field crops and why?
- 4) List the essential nutrients required for plant growth.
- 5) Mention the important characteristics of good seed.
- 6) Differentiate between tith and tillage.
- 7) Mention the factors affecting the plant growth.
- 8) Land leveling is most essential for submerged paddy, why?
- 9) What care should be taken during storage and handling of some of the fertilizers?
- 10) Intercultivation is done in the early stage of plant growth than later stage, Why?
- 11) Mention the advantages of vegetative propagation.
- 12) Differentiate macro and micro nutrients.

**IV. Write short essays on ANY FOUR of the following**

4x5=20

- 1) What is tillage? List the objectives of tillage?
- 2) What are the different methods of sowing? Write the advantages and disadvantages?
- 3) Plant geometry and its effect on growth and yield.
- 4) What quantities of urea, single super phosphate and MOP is required for applying 120 kg N, 60 kg  $P_2O_5$  and 180 kg potassium to tapioca crop.
- 5) What are the requirements of an ideal seedbed?.
- 6) Classify crops based on special purpose and ontogeny/life span.

**V. Write essays on ANY TWO**

2X10=20

- 1) Green manuring- the concept, advantages, disadvantages and important characteristics of plants suitable for green manuring.
- 2) What is nitrogen fixation? Give the species of different rhizobium responsible for nitrogen fixation in different legumes and their potentials.
- 3) Describe the fundamentals principles of agronomy?