

Question Paper Code : 6068

M.Sc. (Ag.) (Semester-I) Examination, 2017

AGRONOMY

[Third Paper]

(Tillage in Crop Production)

Time : Three Hours]

[Maximum Marks : 50

Note : Answer **five** questions in **all**, including Question **No. 1** which is **compulsory**. Attempt **one** question from each unit.

1. Describe the following in brief : [2x10 = 20]

- (a) Aeration of soil
- (b) Effective root zone
- (c) Bulk density and water moment in soil
- (d) Primary tillage
- (e) Puddling and its role
- (f) Soil moisture conservation

- (g) Deep ploughing
- (h) Water holding capacity of soil
- (i) Tillage requirement
- (j) Excessive tillage and its harmful effects

UNIT-I

2. Write about the effects of agronomic practices on soil properties. [8]
3. Write short notes on the following : [8]
 - (a) Infiltration rates and its measurement
 - (b) Measurement of bulk density and root distribution pattern

UNIT-II

4. Write about concepts of zero tillage and minimum tillage in crop production. Also explain associated advantage of zero and minimum tillage. [8]
5. Write short notes on the following : [8]
 - (a) Soil compaction and hardpan
 - (b) Soil sickness and toxicity

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UNIT-III

6. What is tillage, tillage types and implements ? Write briefly about the effect of tillage on root development. [7]
7. Write short notes on the following :
 - (a) Weed control through proper tillage [4]
 - (b) Tillage and decomposition of organic matter [3]

UNIT-IV

8. Write the principles of soil moisture conservation, its importance with increasing water scarcity. [7]
9. Write short notes on the following :
 - (a) Different types of mulch for crop production [4]
 - (b) Soil conservation [3]

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