

KERALA AGRICULTURAL UNIVERSITY

B.Tech. (Agrl. Engg.) 2013 Admission

VIIIth Semester Special Re-Examination-June 2017

Cat. No: Iden 4108

Title: Drainage Engineering (2+1)

Marks: 50

Time : 2 hours

I. Fill up the blanks/True or False:

(10 x 1=10)

1. Deep open drains can be used for ----- drainage .
2. Drainage coefficient is the depth of water to be removed from an area in a period of ----- hours.
3. For design of surface drains, the storm duration is taken as ----- days.
4. ----- is removal of excess water through land shaping.
5. ----- is the condition when the water table comes near the surface where crop growth is affected.
6. In sandy soils, the spacing of field drains varies up to -----m.
7. Mole plough is a special equipment used in laying out -----
8. ----- is the most economical channel cross section of open drain.
9. Interceptor drains are constructed along the field boundary (T/F)
10. Mole drainage is most suitable in soils with very low permeability (T/F)

II. Write short note on ANY FIVE:

(5x 2=10)

1. What is the use of isobath map?
2. Define drainable porosity.
3. What are the causes of water logging.
4. Define hydraulic conductivity.
5. Write short notes on interceptor drains.
6. What is agricultural drainage?
7. What are the materials used in tile drainage?

III Write answers on ANY FIVE:

(5 x 4=20)

1. Write Enerst Equation.
2. How do you measure hydraulic conductivity of soil?
3. Write short notes on open drains.
4. Discuss at length the necessity of piezometers and their installation.
5. Discuss briefly about the extent of waterlogging and salt problems in India.
6. What are the harmful effects of land drainage?
7. Discuss at length about the parallel open ditch and bedding drainage systems with suitable sketches.

IV. Write essay on any ONE

(1 x 10=10)

1. Discuss in detail on the design and layout of tile drainage.
2. What are the drainage problems in acid sulphate soils of Kerala? What is the need of drainage in Kari lands?