KERALA AGRICULTURAL UNIVERSITY

B.sc (Hons) Ag 2015 Admission

I[st] Semester Final Examination-March-2016

Cat. No: Engg.1101 Marks: 50.00

Title: Fundamentals of Soil,Water and Conservation Engineering (1+1) Time: 2 hours

I Fill in the blanks (10 x 1=10)

1. One liter is equal to _____ cubic meter
2. The first reading taken after the dumpy level is set up and levelled is _____
3. The cost of a drip irrigation system depends mainly on the _____ of the crop
4. A _____ is a fixed reference point of known elevation
5. _____ levelling determines the elevations of points at known distances apart along a given line
6. _____ survey is done for determining the feasibility and rough cost of the scheme
7. _____ formula is used to find the mean velocity of flow in open channel
8. Pedometer is used for _____
9. The vertical distance between two consecutive contours is called _____
10. A chain is composed of _____ links

II Write short notes on any FIVE questions (5 x 2=10)

1. Define (I) pacing (ii) chaining
2. Compare the collimation system and rise and fall system of reduction of levels
3. Write the uses of a plumb bob
4. What are back sights, foresights, and intermediate sights in levelling?
5. A rectangular weir of crest length 47cm has a water head of 10cm over the weir crest. Calculate the discharge through this weir
6. What are the factors affecting the water erosion?
7. What is meant by infiltration opportunity time?

III Answer any FIVE questions (5 x 4=20)

1. Components of drip irrigation system
2. Water application efficiency
3. Geological erosion and accelerated erosion
4. What are the stages of gully development?
5. What are the characteristics of contour lines?
6. What are the common agronomic measures of soil conservation?
7. Write importance of farm pond in agriculture. State the points of consideration for selecting a suitable site for constructing a farm pond

IV Answer any ONE of the following (1 x 10=10)

1. What are the obstacles in chain survey? Describe briefly how you would carry out chaining in overcoming these obstacles giving examples with neat sketches
2. Describe any four methods of irrigation, their advantages, disadvantages, and applicability to different field conditions