Water Management

www.k8449r.weebly.com

www.anilrana13014.weebly.com

2015 Model Paper

Title: Water Management in Hort. Crops
Credit Hours: 2(1-0-1x3)
Time: 1 Hour (09:00-10:00 am)
Name: .....

B.Sc. (Horticulture) 1st Year 2nd Semester
Course No: HNW-100
Max. Marks: 15
Date of Exam: 10th May, 2014 (Saturday)
Id. No. .....

Note: All the questions are compulsory, over writing is not allowed.
Write the answer of the questions from 1 to 4 on the paper.

Section A

Q. No. 1: Fill in the blanks. (0.5x4.0= 2.0 marks)

a) ..relative water content... is the ratio of actual water content to water content at saturation and is generally expressed as percentage
b) The stress occurring during 24 hour period of day and night is referred to as ..diurnal stress...
c) Complete the formula WR= (ET, ER) + Application losses + Special needs.
d) In general, the root zone depth of crops on clayey soils is reduced by..10..to...5.. per cent.

Q. No. 2: State whether the following statements True/False? (0.5x4.0= 2.0 marks)

a) Transpiration ratio refers to the volume of water transpired by a plant to produce a unit quantity of dry matter. True
b) Availability of water to plants is less in the upper range of available water. True
c) Presence of organic matter improves the infiltration and WHC of the soil. False True
d) The volume of water absorbed by a plant depends largely on the growth of shoot system. True

Q. No. 3: Tick (√) the correct answer of the followings (0.5x4.0= 2.0 marks)

1) The.....functions in water conductivity.
a) Xylem b) Phloem c) Xylem and Phloem d) None of these

2) Plant processes starting from ..... is affected by the water supply.
a) Germination to maturity of fruits b) Germination to root development
c) Germination to peak vegetative growth d) Germination to Seedling

3) Temporary wilting is also known as .....
a) Incipient wilting b) Mid-day depression c) Incipient wilting and Mid-day depression d) None of these

4) Rooting depth of annual field crops on deep well drained soils range from ..... m.
a) 0.1 to 2.0 b) 0.2 to 2.0 c) 0.3 to 2.2 d) 0.4 to 2.0

Q. No. 4: Match the following. (0.25x4.0= 1.0 marks)

Crop	Water requirements (mm)
Beans	500
Potato	300
Citrus	1200
Banana	900

Section B

Q. No. 5: Differentiate any two between the following. (1.0x2.0= 2.0 marks)

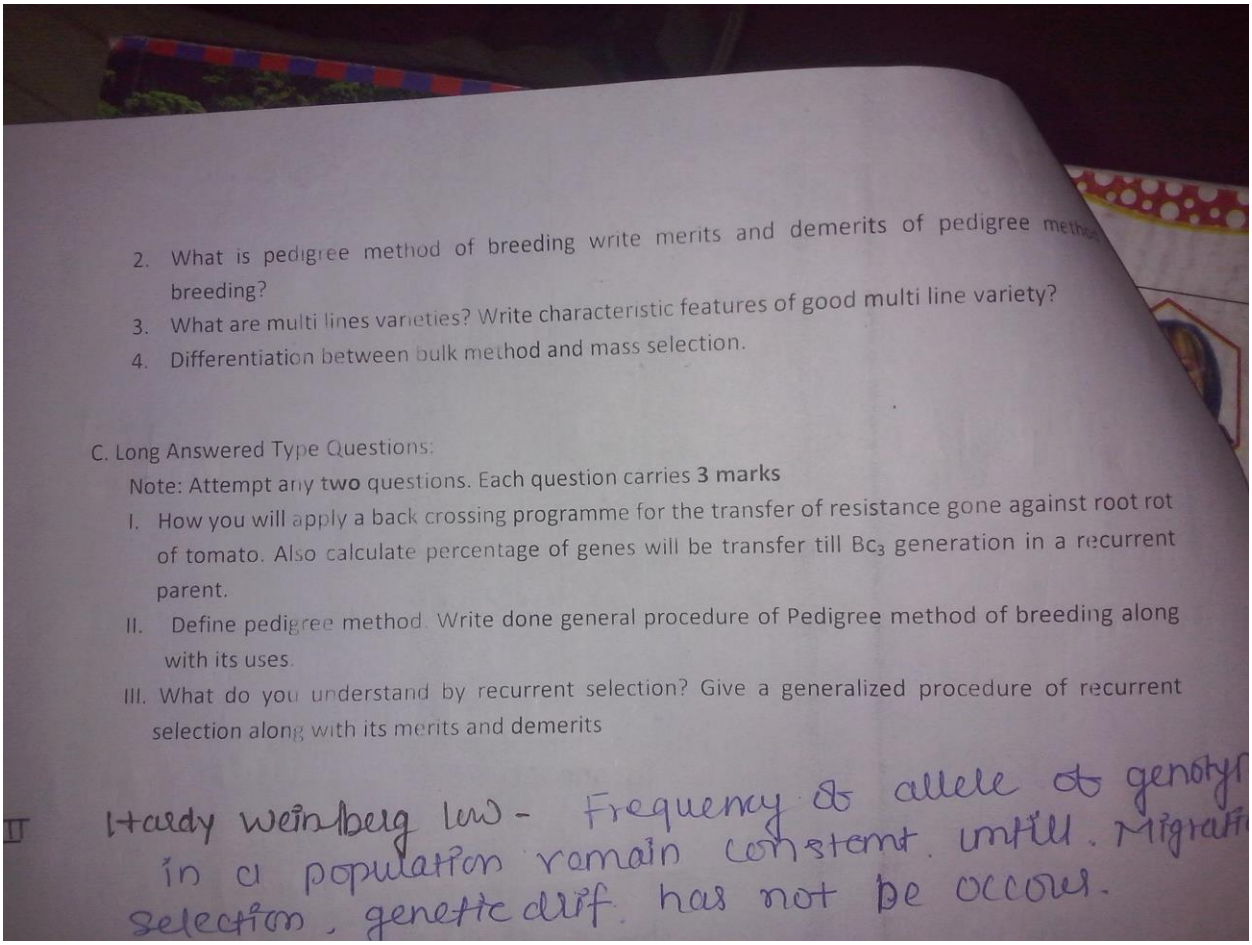
(a) Potential evapo-transpiration (PET) and Actual crop evapo-transpiration (ETcrop)
(b) Peak period consumptive use and Seasonal consumptive use
(c) Net irrigation requirement Gross irrigation requirement

Q. No. 6: Write the short notes on any two of the following topic. (1.0x2.0= 2.0 marks)

(a) Requirements of an ideal irrigated soil
(b) Moisture extraction pattern
(c) Irrigation requirement
(d) Design Application Rate (DAR)

Q. No. 7: Long type questions (Attempt *any two*). (2.0x2.0= 4.0 marks)

(a) What do you mean by available water? Describe the effect of moisture stress on crop growth.
(b) What do you mean by water requirement? Describe the factors affecting evapo-transpiration.
(c) Work out the capacity of sprinkler system to apply water at the rate of 1.5 cm/h. Two sprinkler lines 200 m long each with 18 sprinklers are spaced at 11 m interval on each line. The sprinkler lines are spaced at 16 m interval.



2. What is pedigree method of breeding write merits and demerits of pedigree metho breeding?
3. What are multi lines varieties? Write characteristic features of good multi line variety?
4. Differentiation between bulk method and mass selection.

C. Long Answered Type Questions:

Note: Attempt any **two** questions. Each question carries **3 marks**

I. How you will apply a back crossing programme for the transfer of resistance gone against root rot of tomato. Also calculate percentage of genes will be transfer till Bc_3 generation in a recurrent parent.

II. Define pedigree method. Write done general procedure of Pedigree method of breeding along with its uses.

III. What do you understand by recurrent selection? Give a generalized procedure of recurrent selection along with its merits and demerits

II Hardy weinberg law - Frequency of allele of genotyp in a population remain constant. until. Migrati selection, genetic drif. has not be occurs.