22598

23124

3 Hours / 70 Marks Seat No. | | | | | | | | |

Instructions – (1) All Questions are *Compulsory.*

(2) Answer each next main Question on a new page.

(3) Illustrate your answers with neat sketches wherever necessary.

(4) Figures to the right indicate full marks.

(5) Assume suitable data, if necessary.

(6) Mobile Phone, Pager and any other Electronic Communication devices are not permissible in Examination Hall.

Marks

1. Attempt any FIVE of the following: **10**

a) Enlist any four sources of irrigation water.

b) Define infiltration.

c) Explain base period of Crop.

d) Enumerate any four surface methods of irrigation.

e) Define furrow irrigation.

f) Write down any two benefits of Drip irrigation.

g) Define fertigation.

Marks

2. Attempt any THREE of the following: **12**

a) A rectangular weir of crest length 30 cm is installed at the centre of rectangular channel of 50 cm width. The height of water above the weir crest is 10 cm. calculate the discharge.

b) Write down any four advantages of irrigation.

c) Write note on Net irrigation and gross irrigation requirement.

d) Define Duty and Delta. Also explain the relation between them.

3. Attempt any THREE of the following: **12**

a) Explain the sub-surface method of irrigation.

b) Write any four applications of micro irrigation.

c) Write note on sprinkler irrigation highlighting its (a) adaptability (b) limitations (c) components.

d) Enlist three types of filter in irrigation system and explain any one.

4. Attempt any THREE of the following: **12**

a) Differentiate check basin irrigation and furrow irrigation.

b) Enlist and explain the components of Automation.

c) Explain in details the non sequential automated irrigation system.

d) Define drainage and explain its necessity.

e) Differentiate surface drainage and subsurface drainage.

5. Attempt any TWO of the following: **12**

a) A farmer has grown 0.8 ha of capsicum and 1 ha of cotton with irrigation requirement 8 cm and 12 cm respectively. 1700 lit/min of water diverted to irrigate both crops each day of 24 hrs. then compute the efficiency of an irrigation system of the farmer.

b) Explain the Border irrigation system with neat sketch.

c) Draw a neat sketch of drip irrigation system and explain in details.

Marks

6. Attempt any TWO of the following: **12**

a) Write notes on fertigation system highlighting its.

i) Need

ii) Advantages

iii) Limitations

iv) Methods

b) Enlist the types of special Drainage and explain the mole drains in details.

c) Explain in details the process of reclamation of salt affected soils in details.