



(Following Paper ID and Roll No. to be filled in your Answer Book)

PAPER ID : 180853

Roll No.

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B. Tech.

(SEM. VIII) THEORY EXAMINATION, 2014-15
MINOR IRRIGATION SYSTEM DESIGN

Time : 3 Hours]

[Total Marks : 100

Note : The question paper is divided into three sections. Attempt each section.

SECTION A

- 1 Attempt all short answer type questions : $2 \times 10 = 20$
- (a) What do you mean by “Micro-Irrigation”?
 - (b) Give a past status of and need for micro irrigation.
 - (c) What types of irrigation is categorised into micro-irrigation ?
 - (d) Name any eight components of micro-irrigation systems.
 - (e) Which type of pump is needed for micro-irrigation and why?

- (f) How will you select power unit for pressurized irrigation?
- (g) Name the steps to ensure quality control of the apparatus used.
- (h) What is a polyhouse?
- (i) When the “Integrated wasteland development programme” was launched in the state of Uttar Pradesh & why?
- (j) Differentiate between semi-arid and coastal areas.

SECTION B

2 Attempt any three parts of the following : **3×10=30**

- (a) Describe the present status of micro irrigation in India. Which state of our country has better utilisation?
- (b) Explain the design parameters of micro irrigation system.
- (c) What is a drip irrigation? Give the potential scope of this system. Also discuss the advantage of drip irrigation.
- (d) Explain the design and maintenance of various types of polyhouses.
- (e) What do you mean by waste land? Which types of soils comes in this category? Also write about water scarce areas of India.

SECTION-C

3 Attempt all parts of the following : **10x5=50**

- (a) Discuss the role of government for propagation of micro-irrigation in our country.

OR

Explain the merits and de-merits of micro-irrigation systems.

- (b) Enumerate the construction, installation and maintenance of micro-irrigation systems in India.

OR

What are the types of sprinkler irrigation ? Give a suitable planning to install. Explain in detail?

- (c) What do you mean by "Fertigation"? Discuss the fertiliser application criteria under drip irrigation system.

OR

What is suitability of fertilizer compound to be used as fertigation under sprinkler irrigation system?

- (d) Discuss the status, role and present need of polyhouses for cultivation.

OR

What is the design, working and prospects of green houses for tissue-culture technique?

- (e) Give an account of cost benefit analysis of a watershed development programme by suitable example.

OR

Discuss the factors affecting shelf life of food material during the storage.
