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## PGDWR-04

June – Examination 2020

### Post Graduate Diploma in Water Resources Management Examination

Practical Approach of Water  
Resource Development

Paper : PGDWR-04

*Time : 3 Hours ]*

*[ Maximum Marks : 100*

*Note* :- The question paper is divided into three Sections A, B and C. Write answers as per given instructions.

**Section–A**

**10×2=20**

**(Very Short Answer Type Questions)**

*Note* :- Answer all questions. As per the nature of the question delimit your answer in one word, one sentence or maximum up to **30** words. Each question carries 2 marks.

1. (i) What is sandy soil ?
- (ii) Write infiltration.

- (iii) What do you mean by texture of soil ?
- (iv) What is terrace ?
- (v) Define drip irrigation.
- (vi) Name the factors which affect suitability of irrigation methods.
- (vii) Explain irrigation efficiency.
- (viii) What is plane of best fit.
- (ix) Define ridgeline.
- (x) Mention the objectives of good *Chak* design.

**Section–B** **4×10=40**

**(Short Answer Type Questions)**

**Note** :- Answer any *four* questions. Each answer should not exceed **200** words. Each question carries 10 marks.

2. Explain the measurement of infiltration.
3. Describe the factors affecting infiltration rate.
4. Explain Piezometer method.
5. Why we need subsurface drainage.
6. Explain the structures for measuring the surface flow water in irrigation and drainage system.
7. Write different soil classification in India and explain.

8. What precautions should be taken for the topographical survey and mapping.
9. What is the role of jungle clearance in canal maintenance ?

**Section–C** **2×20=40**

**(Long Answer Type Questions)**

**Note** :- Answer any *two* questions. You have to delimit your each answer maximum up to **500** words. Each question carries 20 marks.

10. Discuss the importance of texture and structure of soil in water management.
11. What do you mean by GT sheet ? What are the main features available on the sheet and how they are helpful in planning of irrigation system ?
12. What do you mean by irrigation losses in the field application from Naka to field ? How many methods of irrigation are there in India ? Explain.
13. Design a drip irrigation system for a field 200 m by 250 m. The soil is light textured with south to north slope of 0.5%. The evaporation is 12.5 mm/day. Available discharge 3.5 lps. Static head 2.5 lps, static head 10 m. Wetted area 20%. Life of orchard 3 years. Orchard is of pomegranate.