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Total No. of Pages : 02

Total No. of Questions : 18

B.Tech. (CE) (2012 to 2017) (Sem.-4)

IRRIGATION ENGINEERING-I

Subject Code : BTCE-405

M.Code : 56087

Time : 3 Hrs.

Max. Marks : 60

INSTRUCTIONS TO CANDIDATES :

1. SECTION-A is COMPULSORY consisting of TEN questions carrying TWO marks each.
2. SECTION-B contains FIVE questions carrying FIVE marks each and students have to attempt any FOUR questions.
3. SECTION-C contains THREE questions carrying TEN marks each and students have to attempt any TWO questions.

SECTION-A**Answer briefly :**

1. Define Crop Ratio.
2. What is Wild Flooding?
3. What do you understand by lining of canals?
4. What are the causes of water logging?
5. Differentiate between initial regime and final regime.
6. What is the importance of drainage in irrigated lands?
7. What do you understand by under drainage of lined canals and why is it provided?
8. What are the causes and ill-effects of water logging and anti water-logging measures?
9. List various types of canals.
10. What do you mean by Groynes and why they are provided?

SECTION-B

11. What are the investigations required in planning of irrigation projects?
12. What are the design considerations of surface drains? Explain its advantages and maintenance process in brief.
13.
 - a. What is strainer and what are the qualities of good strainer?
 - b. Write short note on economics and financing of irrigation projects.
14. Enumerate the different methods used for controlling and training rivers. Explain any one of them in detail.
15. Design a tube-well to be sunk in confined aquifer of 30m thickness fully. The yield required $2000\text{m}^3/\text{day}$. Coefficient of permeability of aquifer was found to be $50\text{m}/\text{day}$. The draw down in the well was taken to be 5m.

SECTION-C

16.
 - a. Distinguish between marginal and retired embankment.
 - b. What is guide bank? Draw a good sketch of guide bank and explain its parts.
17.
 - a. Discuss control seepage in earthen dams.
 - b. Give the list of forces affecting the stability of gravity dam.
18. What are the main causes of failure of weir on permeable foundations and what remedies would you suggest to prevent them?

NOTE : Disclosure of Identity by writing Mobile No. or Making of passing request on any page of Answer Sheet will lead to UMC against the Student.