



C09-C-403

3424

**BOARD DIPLOMA EXAMINATION, (C-09)
OCT/NOV—2018
DCE—FOURTH SEMESTER EXAMINATION
IRRIGATION ENGINEERING**

Time : 3 hours]

[Total Marks : 80

PART—A

3×10=30

- Instructions :** (1) Answer **all** questions.
(2) Each question carries **three** marks.
(3) Answers should be brief and straight to the point and shall not exceed *five* simple sentences.

1. What is Sprinkler irrigation? State the crops and soil conditions for which it is suitable.
2. What is irrigation? What is the necessity of developing irrigation facilities in our country?
3. Distinguish between a weir and a barrage.
4. What are 'marginal bunds' ? Why are they provided?
5. Define (a) Phreatic line, (b) Saturation radient, (c) Breaching section in the dam.
6. What is a drainage gallery? Why drainage galleries are provided in gravity dams?
7. State any three situations whare Earthen dams are suitable.
8. Write the classifacation of canals based on carrying capacity of canal.
9. Define watershed management and list any two objectives of it.

10. What is soil erosion?

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PART-B

10×5=50

Instructions : (1) Answer *any five* questions.
(2) Each questions carries **ten** marks.
(3) Answers should be comprehensive and the criteria for valuation are the content but not the length of the answer.

11. (a) Derive the relationship between duty, delta and base period.

(b) Explain the factors affecting Duty of water.

12. Explain how the velocity of stream flow is measured by a current meter.

13. Draw the cross-section of a weir and state the functions of its component parts.

14. Explain the points to be considered for the selection of site for a reservoir.

15. What are the different modes of failure of gravity dams? Explain with the stability conditions.

16. (a) Why spillway is necessary in a dam?

(b) Draw a neat sketch of ogee spillway and explain its working.

17. Explain with a neat sketch :

(a) Super passage, (b) Aqueduct

18. Explain about the following terms :

(a) Rain water harvesting

(b) Soil moisture conservation

(c) Artificial recharge of water.

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