



c09-c-403

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**BOARD DIPLOMA EXAMINATION, (C-09)
APRIL/MAY—2015
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. State the principal crop seasons in our country. What are the main crops grown in the respective seasons?
2. What is MFD? State any two empirical formulas for the estimation of MFD from a catchment.
3. Distinguish between a weir and a barrage.
4. List the component parts of a weir.
5. What is a spillway? State two common types of spillway in gravity dams.
6. What is a drainage gallery? Why are drainage galleries provided in gravity dams?
7. State any three situations where earthen dams are suitable.

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8. What is a ^{*}berm? What are the advantages of providing berms?
9. State any three objectives of watershed management.
10. What is meant by water harvesting? Why is it necessary?

PART—B

10×5=50

Instructions : (1) Answer *any five* questions.

(2) Each question carries **ten** marks.

(3) Answers should be comprehensive and the criterion for valuation is the content but not the length of the answer.

11. What are the different methods of irrigation? Explain about boarder strip method and check basin method.
12. (a) Define duty and delta.
(b) An ayacut under a resorvior is 15000 hectares and the base period of a crop is 120 days. The duty of the crop at the head of canal is 90 hectares/cumec. Find the capacity of reservoir assuming 15% loss of water in reservoir.
13. Draw the layout of a diversion headwork and state the functions of head regulator, scouring sluices and guide banks.
14. Why are drainage arrangements necessary in earthen dams? Explain about the drainage arrangements provided in earthen dams.
- * 15. Draw and explain the elementary and practical profiles of a gravity dam.
16. Explain the points to be considered for the selection of site for a reservoir.
17. Explain with a neat sketch (a) siphon aqueduct and (b) superpassage.
18. Explain about the characteristics of watershed.

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