



c09-c-403

3424

BOARD DIPLOMA EXAMINATION, (C-09)
OCT/NOV—2014
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) Answer should be brief and straight to the point and shall not exceed *five* simple sentences.

1. State the situations where direct and storage irrigation suitable.
2. What is sprinkler irrigation? State the crops and soil conditions for which it is suitable.
3. Differentiate between a storage headwork and a diversion headwork.
4. List the component parts of a weir.
5. Distinguish between low dam and high dam.
6. What is a drainage gallery? Why are drainage galleries provided in gravity dams?
7. State any three situations where earthen dams are suitable.
8. What is a contour canal? What are its characteristics?

- * 9. What is meant by water harvesting? Why is it necessary?
10. Define watershed management and list any two objectives of it.

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 is run-off? Explain the factors affecting run-off from a catchment.
12. (a) Define duty and delta.
(b) An ayacut under a reservoir 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. Draw a neat sketch of various spillways and explain their suitability briefly.
15. Why are drainage arrangements necessary in earthen dams? Explain about the drainage arrangements provided in earthen dams.
16. Explain the points to be considered for selection of site for a dam.
17. (a) What are the functions of a canal regulator?
(b) Draw the sketch siphon level crossing and explain.
18. (a) List some of the rain-water harvesting structures.
(b) Explain about check dam and percolation tanks.
