C09-C-403

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BOARD DIPLOMA EXAMINATION, (C–09)

MARCH/APRIL—2016

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. Define base period, crop period and delta.

2. Differentiate between perennial irrigation and inundation irrigation.

3. What is the purpose of providing a diversion headwork?

4. List the component parts of a weir.

5. What is spillway? State two common types of spillway in gravity dams.

6. What is the function of core wall in earth dams?

7. State any three situations where earthen dams are suitable.

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8. What is contour canal? What are its characteristics?

9. What are the effects of soil erosion?

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 is run-off? Explain the factors affecting run-off from a catchment.

12. What are the different methods of irrigation? Explain boarder-strip method and contour-forming method.

13. Draw the layout of a diversion headwork and state the functions of head regulator, scouring sluices and guide banks.

14. Why are joints necessary in a gravity dam? List different types of joint and their purposes.

15. Explain the points to be considered for selection of site for a dam.

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

17. Explain with a neat sketch *(a)* siphon aqueduct and *(b)* super-passage.

18. Explain the characteristics of watershed.

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