

7428

BOARD DIPLOMA EXAMINATION, (C-16)

JUNE/JULY—2022

DCE - FOURTH SEMESTER EXAMINATION

IRRIGATION ENGINEERING

Time : 3 hours ]

[ Total Marks : 80

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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 three methods of expressing duty.
2. What is meant by hydrological cycle?
3. List out any three uses of rainfall records.
4. What are the marginal bunds? Why are they provided?
- \* 5. Draw the neat sketch of Ogee spillway and label the parts.
6. Define (a) phreatic line and (b) saturation gradient.
7. State any three advantages of canal lining.
8. Define river training works.
9. List any three advantages of sprinkler irrigation.
10. What is meant by rainwater harvesting?

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**PART—B**

10×5=50

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

11. (a) Write any six advantages and disadvantages of irrigation.

**(OR)**

(b) Derive the relationship between Duty, Delta and Base period.

12. (a) Draw the layout of headworks and briefly explain about its component parts.

**(OR)**

(b) Explain head regulator with help of neat sketch.

13. (a) What are the causes of failure of gravity dam? Explain them briefly.

**(OR)**

(b) Explain the points to be considered for selection of a site for a dam.

14. (a) Explain with neat sketches (i) Super Passage and (ii) Syphon aqueduct.

**(OR)**

(b) Explain about typical cross-section of a canal with a neat sketh.

15. (a) What are the causes of water-logging?

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**(OR)**

- (b) Define the term soil erosion. State factors affecting the soil erosion.

**PART—C**

10×1=10

- Instructions :** (1) Answer the following question.  
(2) The question carries **ten** marks.  
(3) Answers should be comprehensive and criterion for valuation is the content but not the length of the answer

- 16.** Explain the causes of the failure of earthen dams.

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