



c16-c-402

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BOARD DIPLOMA EXAMINATION, (C-16)

AUGUST/SEPTEMBER—2021

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. List any three advantages of irrigation.
- 2. List three uses of rainfall records.
- 3. Distinguish between barrage and weir.
- 4. List different types of dams.
- 5. Draw a critical cross-section of canal in cutting.
- 6. State balance depth of cutting.
- 7. Define river training works.
- * 8. List any three advantages of sprinkler irrigation.
- 9. State the need for ground water recharge.
- 10. State any three advantages of 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) Derive the relation between duty, delta and base period.
(b) Find the duty of water if a crop requires total depth of 920 mm of water for a base period of 120 days.
- 12.** Explain factors effecting run-off.
- 13.** (a) State the factors for selecting suitable site for diversion head works.
(b) State the functions of scouring sluices.
- 14.** Explain the method of constructing earthen dam.
- 15.** Why are joints necessary in a gravity dam? Explain different types of joints and their purposes.
- 16.** Explain with neat sketch (a) super passage and (b) syphon aqueduct.
- 17.** (a) What are the ill effects of soil erosion?
(b) Explain different types of guide banks with sketch.
- 18.** Explain different types of rainwater harvesting techniques.

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