



C14-C-504

4621

BOARD DIPLOMA EXAMINATION, (C-14)

MARCH/APRIL—2017

DCE—FIFTH 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 any method of expressing duty.
2. State any two empirical formulae for the estimation of maximum flood discharge from a catchment.
3. Write any three functions of a scouring sluice.
4. Why is drainage gallery provided in a dam?
5. State any three permanent linings in canals.
6. Write any three maintenance works in canals.
7. Define field capacity.
8. Write any three functions of water user associations.
9. Write any six methods of soil moisture conservation.
10. State any three objects of watershed management.

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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 the criterion for valuation is the content but not the length of the answer.

- 11.** (a) Derive the relationship between duty, delta and base period.
(b) Find the delta for the crop if the duty for base period of 100 days is 1200 hectares/m³.
- 12.** Draw a neat sketch of float type or automatic recording rain gauge and explain how it functions.
- 13.** Explain the component parts of a diversion lead work with a neat sketch.
- 14.** Write short notes on the following :
- (a) Scouring sluice
(b) Divide wall
(c) Fish ladder
(d) Head regulator
- 15.** What are different modes of failure of gravity dams? Explain with the stability conditions.
- 16.** What are different types of earth dams? Give neat sketches of the same.
- 17.** Explain aqueduct with a neat sketch.
- 18.** Write brief notes on the following :
- (a) Repelling Groyne
(b) Deflecting Groyne
(c) Attracting Groyne
