



C14-C-504

4621

BOARD DIPLOMA EXAMINATION, (C-14)

MARCH/APRIL—2018

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. Define (a) delta, (b) base period and (c) crop period. 3
2. List the uses of rainfall records. 3
3. Distinguish between barrage and weir. $1\frac{1}{2}+1\frac{1}{2}=3$
4. List any six situations where earthen dams are suitable. $\frac{1}{2}\times 6=3$
5. Classify the canals based on their alignment. $\frac{1}{2}\times 6=3$
6. What is meant by 'balancing depth of cutting'? 3
7. List any three advantages and three disadvantages of sprinkler irrigation. $\frac{1}{2}\times 6=3$
8. Explain the method of check basin irrigation. 3
9. List any three characteristics of watershed. 3
10. Define rainwater harvesting. Why is it necessary? $1\frac{1}{2}+1\frac{1}{2}=3$

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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. State the advantages and disadvantages of irrigation. 10

12. Sketch and explain the working of Symon's rain gauge. 10

13. Explain briefly the functions of different component parts of a weir with a neat sketch. 10

14. Write short notes on the following giving its functions : 5+5=10

(a) Head regulator

(b) Silt-excluding devices

15. Explain any five causes of failures of gravity dams. 2×5=10

16. List the common types of spillways and explain about any two of them. 4+3+3=10

* **17.** Compare between Kennedy's and Lacey's silt theories. 10

18. Describe any five types of Groynes with sketches. 2×5=10
