



c09-c-403

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**BOARD DIPLOMA EXAMINATION, (C-09)
MARCH/APRIL—2017
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. State any three factors affecting duty.
3. List any three component parts of a weir.
4. Distinguish between barrage and weir.
5. Define (a) maximum water level and (b) freeboard. $1\frac{1}{2}+1\frac{1}{2}=3$
6. List the six types of spillways.
7. Define saturation gradient.
8. Draw the typical cross-section of canal in cutting.

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9. List any three characteristics of watershed.
10. Explain about a check dam.

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) List the various methods of irrigation.
(b) Describe drip irrigation with neat sketch. 3+7=10
12. Define run-off. Explain the factors affecting run-off.
13. Explain with neat sketch the component parts of diversion headwork.
14. Explain the causes of failure of gravity dam and its remedial measures.
15. (a) Explain the construction joint in gravity dam with neat sketch.
(b) State the situations suitable for selection of site for earth dams. 5+5=10
16. Explain with neat sketches the three types of earth dams.
17. (a) Define cross-drainage work.
(b) Explain with neat sketch the siphon aqueduct. 3+7=10
18. (a) Define watershed.
(b) Explain the rainwater harvesting. 3+7=10
