C14-C-**504**

4615

BOARD DIPLOMA EXAMINATION, (C-14)

MARCH / APRIL - 2019

DCE - V 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)   Answer should be brief and straight to the point and shall not exceed five simple sentences.

1   Distinguish between perennial and inundation Irrigation.   **3**

2   (a)   What is M. F. D. ?   **1+2**

(b)   State any two empirical formulae for the estimation of M. F. D. from a catchment.

3   (a)   What are marginal bunds ?   **2+1**

(b)   Why are they provided ?

4   (a)   Define dam.   **1+2**

(b)   List the different types of dams.

5   (a)   What is a berm ?   **1+2**

(b)   State two advantages of providing berm.

6   State classification of canals.   **3**

7   List different methods of Irrigation.   **3**

8   State three duties of Water User Association.   **1×3=3**

9   Define Watershed management.   **3**

10   Write a short note about rain water harvesting.   **3**

4615]   1   [Contd...

PART - B   10×5=50

Instructions :   (1)   *Answer any FIVE questions.*

(2)   *Each question carries TEN marks.*

(3)   *Answer should be comprehensive and the criterion for valuation is the content but not the length of the answer.*

11   (a)   State the relationship between duty, delta and base   **3+7**
period.

(b)   Explain the factors affecting duty of water.

12   Explain the working of float type automatic rain gauge with   **6+4**
a neat sketch.

13   Describe with a neat sketch the component parts of a Weir.   **7+3**

14   Write short notes on the following : $2\frac{1}{2} \times 4 = 10$

(a)   Scouring Sluice

(b)   Divide Wall

(c)   Fish ladder

(d)   Head Regulator

15   (a)   Why are joints necessary in a gravity dam ?   **5+5**

(b)   List different types of joints and their purpose.

16   Explain the causes of failure of earth dams and their   **10**
preventive measures with neat sketches.

17   Explain with a neat sketch.   **5+5**

(a)   Super Passage

(b)   Siphon Aqueduct

18   (a)   Define River training works.   **3+4+3**

(b)   State objectives of River training works.

(c)   List different types of groynes.

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4615]   2   #