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**Question Paper Code: 54014**

B.E. / B.Tech. DEGREE EXAMINATION, NOV 2017

Fourth Semester

Civil Engineering

15UCE404 WATER RESOURCES AND IRRIGATION ENGINEERING

(Regulation 2015)

Duration: Three hours

Maximum: 100 Marks

Answer ALL Questions

PART A - (10 x 1 = 10 Marks)

1. Check flooding is also known as
  - (a) Irrigation by plots
  - (b) corrugation
  - (c) furrow irrigation
  - (d) free flooding
2. Irrigation canals are generally aligned along
  - (a) ridge line
  - (b) contour line
  - (c) valley line
  - (d) straight line
3. The total depth of water required by a crop during the entire period the crop is in the field is
  - (a) Duty
  - (b) delta
  - (c) crop period
  - (d) base period
4. When a canal and a drainage approach each other at the same level, the structure so provided, is
  - (a) an aqueduct
  - (b) a syphon
  - (c) a level crossing
  - (d) inlet and outlet
5. The major resisting force of a gravity dam is
  - (a) water pressure
  - (b) wave pressure
  - (c) weight of dam
  - (d) uplift pressure

6. Meandering of a river generally occurs, in  
(a) rocky stage      (b) delta stage      (c) boulder stage      (d) trough stage
7. A river training work is generally required when the river is  
(a) meandering      (b) aggrading      (c) degrading      (d) all the above
8. In a canal syphon, the flow is  
(a) under atmospheric pressure      (b) pipe flow  
(c) with critical velocity      (d) under negative pressure
9. For standing crops in undulating sandy fields, the best method of irrigation, is  
(a) sprinkler irrigation      (b) free flooding  
(c) check method      (d) furrow method
10. India has more than \_\_\_\_\_ registered Water User Associations.  
(a) 44,000      (b) 55,000      (c) 65,000      (d) 75,000

PART - B (5 x 2 = 10 Marks)

11. What are the benefits of irrigation?
12. Express the term Consumptive use of water.
13. Define diversion head work.
14. Enumerate the various types of irrigation water losses in canal.
15. What do you meant by water users association?

PART - C (5 x 16 = 80 Marks)

16. (a) Discuss about the various classes of soil water and soil moisture constants.      (16)

Or

- (b) Write the history of irrigation projects in India and List out various irrigation projects with reference to Tamilnadu.      (16)

17. (a) What is meant by consumptive use of water? What are the factors affecting consumptive use of water?      (16)

Or

- (b) Explain the methods of irrigation efficiencies.      (16)

18. (a) Enumerate the various types of Spillway and explain any three types with neat sketch. (16)

Or

(b) Explain the various forces acting on a gravity dam and list out the causes of failure of gravity dam. (16)

19. (a) Explain the cross drainage works with neat sketches. (16)

Or

(b) Explain the various types of river training works with neat sketches. (16)

20. (a) Discuss the roles and responsibilities of farmers and governmental agencies in the farmers association. (16)

Or

(b) What is the necessity of participatory irrigation management and explain case study in India. (16)

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