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**Reg. No. :**

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**Question Paper Code: 54104**

B.E. / B.Tech. DEGREE EXAMINATION, NOV 2018

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. For irrigation purposes, the p-H value of water should be CO1- R  
(a) between 3 and 6    (b) between 6 and 8.5    (c) between 8.5 and 11    (d) more than 11
2. Useful soil moisture for plant growth, is CO1- R  
(a) Capillary water    (b) Gravity water    (c) Hygroscopic water    (d) Chemical water
3. The measure to remove water logging of land, is CO2- R  
(a) to reduce percolation from canals and water courses  
(b) to increase outflow from the ground water reservoir  
(c) both (a) and (b)  
(d) neither (a) nor (b)
4. The efficiency of water application does not depend upon CO2- R  
(a) Climatic conditions    (b) Type of soil  
(c) Method of application    (d) Geometry of the conveyance system
5. A structure constructed at a dam site for disposing the surplus CO3- R  
water from upstream to downstream is  
(a) sluiceway    (b) spillway    (c) barrage    (d) diversion headwork

6. In a concrete gravity dam with a vertical upstream face, the stabilizing force is provided by the CO3- R
- (a) Weight of dam (b) Water supported against upstream slope  
(c) Both (a) and (b) (d) None of them
7. Irrigation canals are generally aligned along CO4- R
- (a) Contour line (b) Ridge line (c) Valley line (d) Straight line
8. A canal head works has nothing to do with a CO4- R
- (a) Weir (b) Guide bank (c) Head regulator (d) Safety ladder
9. For standing crops in undulating sandy fields, the best method of irrigation, is CO5- R
- (a) sprinkler irrigation (b) free flooding  
(c) check method (d) furrow method
10. Over irrigation is responsible for CO5- R
- (a) water drainage (b) water management  
(c) seepage (d) furrow method

PART – B (5 x 2= 10Marks)

11. What is irrigation requirement of crop ? CO1- R
12. Define base period. CO2 -R
13. Define diversion head work CO3- R
14. Why canal drop is constructed? CO4 -R
15. What is mean by Drip Irrigation? CO5- R

PART – C (5 x 16= 80Marks)

16. (a) Write short notes on Planning and development of an irrigation Project CO1- U (16)
- Or
- (b) Explain the various studies involved in planning a water resources project. CO1- U (16)
17. (a) Define and state the relation between duty and delta. Enumerate the various factors affecting duty of water. CO2- U (16)
- Or
- (b) Explain the methods of irrigation efficiencies. CO2 -U (16)

18. (a) Differentiate between Weir and Barrage. CO3- U (16)  
Or  
(b) Explain types of spillways with neat sketches. CO3- U (16)
19. (a) Summarize the various design aspects of irrigation canals. CO4-U (16)  
Or  
(b) Explain the various types of river training works with neat sketches CO4- U (16)
20. (a) Discuss the roles and responsibilities of farmers and governmental agencies in the farmers association. CO5- U (16)  
Or  
(b) Describe the important functions of water users association. CO5- U (16)

