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**Question Paper Code: 54104**

B.E. / B.Tech. DEGREE EXAMINATION, DEC 2020

Fourth Semester

Civil Engineering

15UCE404- WATER RESOURCES AND IRRIGATION ENGINEERING

(Regulation 2015)

Duration: 1.15 hrs

Maximum: 30 Marks

PART A - (6 x 1 = 6 Marks)

**(Answer any six of the following questions)**

1. Alkaline soils are best reclaimed by CO1- R
  - (a) leaching
  - (b) addition of gypsum to soil
  - (c) providing good drainage
  - (d) addition of gypsum to soil and leaching
2. With the increase in supplied irrigation water, the yield of crops CO1- R
  - (a) Increases continuously
  - (b) Increases upto a certain and then becomes constant.
  - (c) Decreases continuously
  - (d) increases up to a certain limit and then decreases
3. The most expected crops in a hot arid district of Rajasthan State in India, in the month of September are CO2- R
  - (a) Rice and sugarcane
  - (b) Bazar and maize
  - (c) Wheat and maize
  - (d) Tobacco and cotton
4. The relation between duty(D) in hectares/ cumec, delta ( $\Delta$ ) in meters and base period (B) in days is CO2- R
  - (a)  $\Delta = 8.64 B / D$
  - (b)  $\Delta = 86.4 B / D$
  - (c)  $\Delta = 8.64 D / B$
  - (d)  $\Delta = 8640 B / D$
5. If two canals are taken off from both the flanks of a river at the side of a diversion headwork, then the number of undersluices and divide walls will respectively be CO3- R
  - (a) 1 and 1
  - (b) 1 and 2
  - (c) 2 and 1
  - (d) 2 and 2

6. In a barrage project, a divide wall is provided to CO3- R
- (a) Separate the lower crest ‘undersluice side’ from the higher crest ‘weir side’  
 (b) Separate the higher crest ‘undersluice side’ from the lower crest ‘weir side’  
 (c) Keep the cross currents away from the barrage body  
 (d) Serve none of the above purposes
7. A canal escape is a structure constructed for the purpose of CO4- R
- (a) dissipating excess energy (b) acting as a forebay  
 (c) discharging wastewater from the canal (d) all of the above
8. Silt excluders are constructed CO4- R
- (a) On the river bed downstream of the head regulator  
 (b) On the river bed upstream of the head regulator  
 (c) On the canal bed downstream of the canal head regulator  
 (d) None of these
9. The efficiency of water conveyance does not depend upon CO5- R
- (a) Climatic conditions  
 (b) Geometry of the conveyance system  
 (c) Nature of the boundary of the conveyance system  
 (d) Method of application of water
10. Over irrigation is responsible for CO5- R
- (a) seepage (b) water logging  
 (c) water management (d) permeability

PART – B (3 x 8= 24 Marks)

**(Answer any three of the following questions)**

11. Discuss the advantages and ill effects of irrigation CO1- U (8)
12. Explain the factors affecting duty. How to improve duty? CO2- U (8)
13. Differentiate between weir and barrage CO3- U (8)
14. Compare kennadys and laceys regime theory. CO4- U (8)
15. Discuss the various techniques used for distributing water in the farms. CO5- U (8)