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Question Paper Code: 35106

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

Fifth Semester

Civil Engineering

01UCE506 – IRRIGATION ENGINEERING

(Regulation 2013)

Duration: 1.15 hrs

Maximum: 30 Marks

PART A - (6 x 1 = 6 Marks)

(Answer any six of the following questions)

- The irrigation is necessary in an area.
 - where there is a scanty rainfall
 - where the rainfall is non-uniform
 - where commercial crops require more water
 - all the above
- Salinity in irrigation water is measured by
 - SAR value
 - electrical conductivity value
 - pH value
 - none of these
- The ratio between the area of a crop irrigated and the quantity of water required during its entire period of the growth, is known as
 - delta
 - duty
 - base period
 - crop period
- The consumptive use of water of a crop
 - is measured as the volume of water per unit area
 - is measured as depth of water on irrigated area
 - may be supplied partly by precipitation and partly by irrigation
 - all the above
- The maximum permissible eccentricity for no tension at the base of a gravity dam is
 - B/2
 - B/4
 - B/6
 - B/8

6. In a chute spillway, the flow is usually
(a) uniform (b) subcritical (c) critical (d) supercritical
7. Irrigation canals are generally aligned along
(a) ridge line (b) contour line (c) valley line (d) straight line
8. Which of the following is the correct sequence of the parts of a canal system?
(a) head works, distributary, branch canals and minor
(b) head works, main canal, branch canal, distributary and minor
(c) head works, main canal, branch canal, minor and distributary
(d) none of the above
9. For irrigation purposes, the p-H value of water should be
(a) between 3 and 6 (b) between 6 and 8.5
(c) between 8.5 and 11 (d) more than 11
10. The components of on farm developments
(a) crossing in field channel (b) field drain
(c) formation of field channel (d) all the above

PART – B (3 x 8= 24 Marks)

(Answer any three of the following questions)

11. Explain briefly the classification of soil water. (8)
12. After how many days you will supply water to soil in order to insure sufficient irrigation of the crop, if field capacity of the soil = 30 %, permanent wilting point is 12%, density of soil = 1.25 gm/cc, effective depth of root zone = 60 cm, and daily consumptive use of water for the given crop = 12.5 mm. (8)
13. What are the factors affecting the selection of type of dam? (8)
14. What is a cross drainage works? Explain any two cross drainage works with neat sketches. (8)
15. Write notes on
(i) Participatory irrigation management. (8)