KUMARAGURU
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Register Number: ……..

B.E DEGREE EXAMINATIONS: MAY 2015

(Regulation 2009)

Fifth Semester

CIVIL ENGINEERING

CEE111: Irrigation Engineering

Time: Three Hours **Maximum Marks: 100**

Answer all the Questions:-

PART A (10 x 1 = 10 Marks)

1. Crop period is the time a crop takes
   a) from first watering to last watering
   b) from sowing to its harvesting
   c) from sowing to last watering
   d) from first watering at the time of sowing to its harvesting
2. Present water use efficiency of 45 % if increased to 60 % means increasing the Irrigated area without developing new water sources:
   a) 50%
   b) 75%
   c) 100%
   d) 150%
3. Where water must be raised by pumps or other means to irrigate crops is ---------- irrigation
   a) lift
   b) Sprinkler
   c) surface
   d) furrow
4. The drip irrigation method has water application efficiency of------ percent
   a) 60
   b) 70
   c) 80
   d) 90
5. A weir essentially comprises:
   a) high set crest
   b) series of gates
   c) road way across the river
   d) all of them
6. Guide banks are provided
   a) in the direction of flow
   b) at right angle to the flow
   c) at an angle to the flow
   d) all of them

7. Canal efficiency suffers from

a) Silting and souring
b) faulty design slope/slit factor
c) weed growth
d) all of these

8. A stable canal section is that which neither silts nor sours with given

a) discharge
b) water surface slope
c) silt charge
d) all the above

9. Measures for reducing irrigation water losses is/are

a) lining of irrigation canals
b) reduction of the exposed water surface
c) channel section free from vegetation
d) all of these

10. Optimisation means improving the agricultural productivity by the way of ---------- inputs

a) maximum
b) optimum
c) minimum
d) zero

PART B (10 x 2 = 20 Marks)

11. What is the necessity for irrigation in India?
12. Distinguish between Kharif crops and Rabi crops.
13. What is tank irrigation method?
14. What are the different types of sprinkler systems?
15. Distinguish between weir and barrage
16. List the forces acting on the dam.
17. What is meant by canal drop?
18. List the functions of canal head regulator.
19. What is the role of an irrigation engineer in water management?
20. What are the various functions of water users association?

PART C (5 x 14 = 70 Marks)

21. a) Discuss the advantages and ill-effects of irrigation.

(OR)

b) What is meant by irrigation efficiency? List various efficiencies under which irrigation performance is evaluated. Discuss about each one and how these could be improved.

22. a) Explain in detail with the aid of neat sketches, the various methods of surface irrigation.

(OR)

b) Distinguish between Sprinkler and Drip Irrigation systems.

23. a) Draw the neat sketch and explain the different parts of earth dam and gravity dam.

(OR)

b) (i) Explain the masonry weir with vertical drop with a neat sketch. (7)

(ii) Discuss the necessity of spillways and how to locate them. (7)

24. a) Explain with sketches about various types of cross- drainage works.

(OR)

b) Define river training. Elaborate various types of river training and protection works.

25. a) Discuss in detail about various aspects of on-farm development works.

(OR)

b) (i) Discuss the role of farmers in water management. (5)

(ii) Elaborate on Planning and development of irrigation projects. (9)

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