Question Bank (I scheme)

Name of Course: Water Resources Engineering Subject code: 22501

Semester : Fifth Programme: Civil

Unit test I

UNIT 1 Introduction to irrigation and hydrology(14 MARKS)

(2 Marks)

1. Define Rainfall, Runoff
2. Define Irrigation,Hydrology.
3. Define dependable yield from a catchment area.
4. State Inglis formula for MFD(Maximum flood discharge)
5. Classify irrigation project on the basis of purpose.

(4 Marks)

6. State any 4 advantages and 4 ill effects of irrigation.

7. Explain the four factors affecting runoff

8. Explain hydrological cycle.

9. Explain Thiessen's Polygon Method for calculating average rainfall with neat sketch.

10. Compute the avg. rainfall by Theissen's Polygon Method for Dam site

Raingauge of rainfall in mm	1400	1500	1100	1200	1300
C.A. Sq.Km	20	30	24	26	25

UNIT 2 Crop water requirement and reservoir planning (16 MARKS)

(2 Marks)

11. Deference between crop period and base period.
12. Define duty and delta.
13. Define silting of reservoir.
14. What is crop season?
15. Define assessment of irrigation water and state its method.

(4 Marks)

16. Explain the various engineering survey to be conducted for an irrigation project
17. Establish relationship between duty and delta.
18. Describe the four factors affecting the rate of silting with suggestive control measure.
19. Fix FRL of data from the following data.
DSL=110.00mm
Tank losses =1500m^3
Effective storage 8000 m^3

Contour RL(m)	110	112	114	116	118	120
Capacity m^3	1000	3000	5000	6000	9000	12000

20. An area irrigated by distribution is 200 ha out of which 140 ha is jawar and 60 ha is sugarcane. If delta for jawar is 45 cm and for sugarcane it is 180 cm and avg transit losses during Kharif are 30 % and for rabi are 35%. Calculate duty of each crop at tread of distributary.

21. Intensity of irrigation is 30 % for wheat and 15 % for rice and culturable command area of a distributary is 5000ha. The kor period is 21 days for wheat and 14 days for rice . Calculate total discharge excluding losses take watering is 12 cm and 25 cm for wheat and rice .

UNIT 3 Dams and Spillway (12MARKS)

(2 Marks)

22. Classify dams on the basis of methods of construction of dam

23. Enlist purpose of galleries in Dam

24. Spillway is safety valve for dam justify

25. Define emergency spillway and main spillway

(4 Marks)

26. Write the function of following terms a)turfing b)berms c)hearting 4)Rock toe

27. Differentiate between practical profile and elementary profile of gravity Dam.

28. Explain construction and working of ogee spillway with sketch.

29. Explain the type of failure of earthen dam and its remedial measure.

30. Draw a typical cross section of Earthen dam showing all components and state function of any four components.

31. State joints used in construction of gravity dam.

32. State merits of gravity dam over earthen dam .

33. Enlist the various forces acting on gravity dam.

34. Explain importance of drainage gallery in gravity dam and joints in gravity dam.

35. Differentiate high dam with a low dam? Explain with neat sketch.