26756

Name : ....
Reg. No: ....

SIXTH SEMESTER B.TECH DEGREE EXAMINATION, MAY 2012

CE 09 601 – Hydrology & Irrigation Engineering
(2009 Admission)

Time : Three Hours   Maximum : 70 Marks

Part A (answer all questions)

1. Define S hydrograph
2. Define water application efficiency
3. What are the mill effects of water logging
4. What is canal lining
5. Explain design flood

(5 X 2 = 10)

Part B (Answer any four Questions)

6. Explain intensity duration frequency analysis of rainfall data
7. Explain any five methods of applying water into the field
8. Write about silt excluders
9. What are the different ways in which the irrigation canals can be aligned
10. Write about various operations to be carried out for proper maintenance of irrigation channels
11. Explain rational formula for computing peak flood. What are it' limitations

(5 x 4 =20)

Part C (Answer all questions, each question carries 10 marks)

12.A) (i)Explain different types of self recording rain gauges

(ii)The normal annual rainfall depths recorded at 5 rain gauge stations are 910, 1070, 1410, 810, and 500mm respectively Determine the optimum number of rain gauge stations to be established in the drainage basin if it is desired to limit then error in the mean value of rainfall to 10%

OR

B) The ordinates of 2hr unit hydrograph are given in table. Using S hydrograph derive the ordinates of 6hr unit hydrograph for the same catchment

time (hr)	0	2	4	6	8	10	12	14	16	18	20	22	0
ordinates of unit hydrograph (cumecs)	0	25	100	160	200	170	110	70	30	20	8	0	0

13.A) (i) what are the methods of controlling reservoir sedimentation

(ii) ..... the relationship between duty and delta

Turn over

OR

B (i) Explain different types of weirs

(ii) What is a flow duration curve?

14.A) design a channel section by Kennedy's theory given the following date
Discharge Q=28cumecs; Kutter's N=0.0225; critical velocity ratio m=1;
Side slope ½:1; B/D ratio=7.6.
Find the bed slope of the channel

OR

B) Explain in different types of canal falls

15.What are the methods for estimation of peak flood

OR

B) Write notes on
(a) Flood forecasting
(b) Flood warning systems
(c) Flood control works

$(4 \times 10 = 40)$

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