*Roll No.* _____

# END SEMESTER EXAMINATION
## SEMESTER - VI

**COURSE CODE : CE 503** **DURATION : 3 (THREE)HRS**
**COURSE TITLE : WATER RESOURCE ENGINEERING** **MAXIMUM MARKS : 75**
**SESSION: JULY - DEC'2021** **PASS MARKS : 35 %**

*NOTE:* *1. Attempt any 5 (five) questions (15 Marks each)*
*2. Mark for each question is shown against it.*
*3. Assume suitable logical data wherever necessary.*

**1.** **(a)** Define irrigation. What do you mean by intensity of irrigation? Mention the necessity, advantages and disadvantages of irrigation. **(9)**
**(b)** An irrigation channel runs for 125 days in a season when wheat is grown. Total depth of the water is found to be 38cm. find the duty of irrigation channel water. **(4)**
**(c)** Define: (i) CCA (ii) GCA **(2)**

**2.** **(a)** Write limitation of centrifugal pump. **(3)**
**(b)** Compare deep wells and shallow wells **(4)**
**(c)** What is hydrology? Explain hydrological cycle with neat sketch. **(2+6)**

**3.** **(a)** Describe the Hydrograph and its representation. **( 5)**
**(b)** What do you mean by Gravity dam and earthen dam? Explain force acting on gravity dam **(2+3)**
**(c)** Define gravity dam. What are the factors that govern the selection of a dam site **(2+3)**

**4.** **(a)** How water logged land be reclaimed? **(5)**
**(b)** What is current meter? List down its uses and limitation. **(2+4)**
**(c)** Differentiate between the cross drainage work and diversion head work **(2+2)**

**5.** **(a)** What are the objectives of canal lining? Explain how canal are aligned. **(3+5)**
**(b)** Define yield of pump. What are the methods used for finding the yield of a pump? **(2+5)**

**6.** **(a)** Discuss the relation between runoff and rainfall. Explain the factors affecting run off. **(7)**
**(b)** Explain briefly automatic and non-automatic rain gauges **(8)**

**7.** **(a)** Write a short note of the following (any five) **(5x3)**
(i) Crop rotation
(ii) Root zone depth
(iii) Catchment area
(iv) Weir and barrage
(v) Kor Depth

**8.** **(a)** Explain why earthen dam fail? Suggest some protection against failure. **(2+4)**
**(b)** Compare Centrifugal pump and airlift pump **(2+2)**
**(c)** With neat sketch showing various components of earthen dam, elaborate each component briefly. **(5)**

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