Roll No. ☐☐☐☐☐☐☐☐☐☐☐   Total No. of Pages : 02

Total No. of Questions : 18

B.Tech. (CE) (2018 Batch)   (Sem.–4)

HYDROLOGY & WATER RESOURCES

Subject Code : BTCE-403-18

M.Code : 77646

Time : 3 Hrs.   Max. Marks : 60

INSTRUCTIONS TO CANDIDATES :
1. **SECTION-A is COMPULSORY consisting of TEN questions carrying TWO marks each.**
2. **SECTION-B contains FIVE questions carrying FIVE marks each and students have to attempt any FOUR questions.**
3. **SECTION-C contains THREE questions carrying TEN marks each and students have to attempt any TWO questions.**

SECTION-A

Answer briefly :

Q1. What is Isohyets?

Q2. Wind speed is measure with………………

Q3. What are the sources of Hydrosocial Data in India?

Q4. What the forms of sub surface zone?

Q5. Write down the different forces acting on a gravity dam.

Q6. Explain essential components of drip irrigation.

Q7. Define Infilteration indices.

Q8. State drawbacks of kennedy's theory.

Q9. What is the optimum depth of kor watering of rice crop?

Q10. Define storage coefficient & coefficient of transmissibility.

SECTION-B

Q11.   What is the meaning of precipitation? Explain the types of precipitation.

Q12.   Describe the hydrologic cycle with a neat sketch.

Q13.   How will you measure the infilteration characteristics of a soil at a given location? Explain by hydrograph analysis.

Q14.   Define Irrigation scheduling. Outline the methods to schedule the irrigation in detail.

Q15.   800 m^3 of water is applied to a farmer's rice field of 0.6 hectares. When the moisture content in the soil falls to 40% of the available water between the field capacity (36%) of soil and wilting (15%) of the soil crop combination. Determine the field application efficiency. The root zone depth of rice is 60 cm. Assume porosity = 0.4.

SECTION-C

Q16.   Define Water Logging. Explain in detail about remedial measure of water logging.

Q17.   Explain the failure of gravity dams and with the precautions against failure.

Q18.   Explain the procedure of designing an irrigation channel using Kennedy's theory, Given Q, Kutter's N, m & S.

NOTE : Disclosure of Identity by writing Mobile No. or Making of passing request on any page of Answer Sheet will lead to UMC against the Student.