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Total No. of Pages : 02

Total No. of Questions : 18

B.Tech. (Agriculture Engineering) (Sem.-3)

**IRRIGATION ENGINEERING**

Subject Code : BTAG-305-19

M.Code : 78591

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**

Write briefly :

- 1) Write a short note on the main sources of the irrigation.
- 2) Explain evaporation.
- 3) What is the design criteria of an irrigation system?
- 4) Which river basin has the highest total replenishable ground water resource?
- 5) Define irrigation scheduling.
- 6) What are the effective approaches or methods for addressing and/or reducing seepage and conveyance losses from open ditches?
- 7) What are different types of irrigation systems?
- 8) How is planning important to irrigation system and what are the design consideration in the irrigation system?
- 9) What do you understand by main intake structure and pumping station in an irrigation system?
- 10) What are the design principles in the design of water conveyance system?



**SECTION-B**

- 11) Write a note on the purpose, requirements, layout of irrigation water distribution system.
- 12) What is the general water balance equation? Explain the concept.
- 13) Write a note on water resources development in India through inter-linking of rivers.
- 14) Write a note on the past, current and future state of canal irrigation in India.
- 15) Write a note on the components of water balances.

**SECTION-C**

- 16) a) Write a note on the history and development of irrigation in India.  
b) What are the instruments to measure irrigation water? Explain.
- 17) a) What are the different formulations for levying irrigation charges?  
b) Explain and distinguish between the surface and ground water resources.
- 18) a) Write a note on the water resource development in India.  
b) What are the principle factors that influence water conveyance efficiency? Elaborate them in your own words.

**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.**