Roll No. [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ] Total No. of Pages : 02

Total No. of Questions : 09

B. Tech. (CE) (Sem.–4th)

IRRIGATION ENGINEERING-I

Subject Code : BTCE-405 (2011 Batch)

Paper ID : [A1175]

Time : 3 Hrs. Max. Marks : 60

INSTRUCTION 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 has to attempt any FOUR questions.
3. SECTION-C contains THREE questions carrying TEN marks each and students has to attempt any TWO questions.

SECTION-A

1. **Answer briefly :**

   a. List the various objectives of irrigation.

   b. Write short note on conjunctive use of surface and ground water.

   c. Distinguish between Delta, duty and base period.

   d. What is an Inundation Canal?

   e. List the various types of Canals.

   f. In what situations lined canals are preferred?

   g. How Tubewell site is selected?

   h. List the various types of river training works.

   i. Why drainage is provided behind lining of canals?

   j. What do you understand by interference of a Tubewell?

SECTION-B

2. Why is Irrigation necessary ? Discuss the impact of irrigation on human environment.

3. What is Drip irrigation ? Describe briefly the component parts of drip irrigation system.

4. Discuss the factors affecting Seepage losses in irrigation channels. Also explain the two conditions of seepage from irrigation channels.

5. Explain the procedure of designing an irrigation channel, using Kennedy's theory, given Q, Kutter's N, m and S.

6. Discuss the causes and effects of waterlogging in a canal fed land.

SECTION-C

7. Discuss the stepwise procedure for the planning of a multipurpose project.

8. Explain the functions of Groynes using different classifications.

9. Explain the following :

   a. Advantages of tile drains.

   b. Transmissibilty and storage

   c. Approach embankments.

   d. Cavity type Tubewell.