Roll No .....

CE - 602

B.E. VI Semester

Examination, June 2015

Water Resources and Irrigation Engineering

Time : Three Hours

Maximum Marks : 70

Note: i) Answer five questions. In each question part A, B, C is compulsory and D part has internal choice.

ii) All parts of each questions are to be attempted at one place.

iii) All questions carry equal marks, out of which part A and B (Max.50 words) carry 2 marks, part C (Max.100 words) carry 3 marks, part D (Max.400 words) carry 7 marks.

iv) Except numericals, Derivation, Design and Drawing etc.

1. a) Draw the labelled diagram of any recording type raingauge.
   b) Describe Thiessen polygon method.
   c) Describe Runoff estimation by any one method.
   d) Explain S-curve method to derive unit hydrograph.

   OR

   Explain synthetic unit hydrograph and its limitations.

2. a) Describe unconfined aquifer.
   b) Explain ground water recharge method (any one)
   c) Describe probability method for flood estimation.
   d) Explain any one flood routing method.

   OR

   Describe reclamation of water logged and salt affected lands.

3. a) Describe data required for the planning of a single purpose WRE project.
   b) Explain a multipurpose water resources project.
   c) Describe any one rain water harvesting method.
   d) Explain linear programming and its application to WRE projects.

   OR

   Describe appraisal and economic analysis of WRE multipurpose project.

4. a) Classify Irrigation systems.
   b) Describe drip Irrigation method.
   c) Establish a relationship between Duty and Delta.
   d) Describe methods to improve duty.

   OR

   Name crop seasons, principal crops under them and crop rotation.

5. a) Explain type of canals.
   b) Differentiate between unlined and lined canals.
   c) Describe pumps and their selection criteria.
   d) Name various canal falls and explain design of any one in detail.

   OR

   Explain hydraulic design of wells.