

315302

12526

3 Hours / 70 Marks

Seat No.

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- Instructions* – (1) All Questions are *Compulsory*.
- (2) Answer each next main Question on a new page.
- (3) Illustrate your answer with neat sketches wherever necessary.
- (4) Figures to the right indicate full marks.
- (5) Assume suitable data, if necessary.
- (6) Use of Non-programmable Electronic Pocket Calculator is permissible.
- (7) Mobile Phone, Pager and any other Electronic Communication devices are not permissible in Examination Hall.

Marks

- 1. Attempt any FIVE of the following: **10****
- a) Define irrigation.
- b) Classify irrigation schemes in India with respect to calculate command area.
- c) State any four sources of irrigation water.
- d) Define duty and delta.
- e) List types of micro-irrigation system.
- f) Define Fertigation.
- g) List any two causes of water-logging.

P.T.O.

- 2. Attempt any THREE of the following: 12**
- a) State the units and methods of measuring irrigation water.
 - b) State kinds of soil water with examples.
 - c) Classify irrigation methods in details.
 - d) Explain furrow irrigation system and state its types.
- 3. Attempt any THREE of the following: 12**
- a) Classify weirs in details.
 - b) Explain the components of micro-irrigation system.
 - c) Write any four advantages and limitations of drip irrigation.
 - d) Write the merits and demerits of automation in irrigation system.
- 4. Attempt any THREE of the following: 12**
- a) Define Infiltration and enlist various factor's affecting infiltration.
 - b) Differentiate between border and check basin irrigation.
 - c) Suggest a suitable irrigation method for paddy cultivation in clay soil. Justify your answer.
 - d) Enlist the factors affecting drainage.
 - e) Explain special drainage system in detail.
- 5. Attempt any TWO of the following: 12**
- a) Write advantages and disadvantages of irrigation in detail.
 - b) Explain the relationship between duty and delta.
 - c) Suggest an irrigation method for orchard crops under water scarcity condition and justify.
- 6. Attempt any TWO of the following: 12**
- a) Explain operation and maintenance of sprinkler irrigation system.
 - b) Suggest with justification reclamation measures for salt affected soils.
 - c) Describe the components of a surface drainage system with a neat sketch.
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