

22701

22223

3 Hours / 70 Marks

Seat No.

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- Instructions* – (1) All Questions are *Compulsory*.
(2) Illustrate your answers with neat sketches wherever necessary.
(3) Figures to the right indicate full marks.
(4) Assume suitable data, if necessary.
(5) 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) Enlist different factor affecting soil structure.
 - b) Give the structural classification of soil.
 - c) Enlist physical properties of soil.
 - d) Define hydrology.
 - e) Enlist factor affecting water erosion.
 - f) State any three principles of erosion control.
 - g) Enlist different types of rain water harvesting techniques.
- 2. Attempt any THREE of the following: 12**
- a) Differentiate between various water losses methods.
 - b) Discuss various factors affecting runoff along with its measurement.
 - c) Explain in detail hydrology cycle with neat sketch.
 - d) What are different types of precipitation how it can be differentiated from each other?

P.T.O.

- 3. Attempt any THREE of the following:** **12**
- a) Explain gully erosion along with its classification.
 - b) Explain splash and stream bank erosion in detail.
 - c) What are different causes of soil erosion? Enlist factor affecting soil erosion.
 - d) Discuss in brief temporary and permanent gully control structures.
- 4. Attempt any THREE of the following:** **12**
- a) Discuss different principles of soil erosion.
 - b) Differentiate between contour bunding and graded bunding.
 - c) Explain different field practices involved to control erosion by wind and water.
 - d) Explain in brief strip cropping along with a suitable example of it.
 - e) Explain function of ground water recharge.
- 5. Attempt any TWO of the following:** **12**
- a) What are different classifications of terracing? Give function of each.
 - b) Explain in detail different types of bench terraces.
 - c) In detail explain design of grassed waterways.
- 6. Attempt any TWO of the following:** **12**
- a) Discuss importance and application of water harvesting technology.
 - b) Explain in detail any two techniques involved in ground water recharge.
 - c) Enlist different rain water harvesting techniques. Explain any one in detail along with its application.
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