

# 17583

**14115**

**2 Hours / 50 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 answers 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 NINE of the following:** **18**
- a) State any four principles of Watershed Management.
  - b) State the use of remote sensing in Watershed Management.
  - c) Define ‘Soil’ as per Watershed Management.
  - d) State the uses of water conservation and soil capability in agriculture.
  - e) What do you mean by diversion structures? Give examples. (Any two).
  - f) Enlist any four geomorphological watershed characteristics.
  - g) Enlist the required hydrological data for watershed planning.
  - h) What is contour farming?

P.T.O.

- i) Define 'Mulching'.
- j) Distinguish between mixed cropping and crop rotation on any two points.
- k) Define 'Rain water harvesting'.

**2. Attempt any FOUR of the following: 16**

- a) State any four advantages of crop rotation.
- b) Explain the role of grasses in soil conservation.
- c) Explain the various factors affecting Watershed Management. (any four)
- d) Explain in brief about conservation farming.
- e) State any four objectives of Watershed Management.
- f) Explain the concept of Watershed Management.

**3. Attempt any TWO of the following: 16**

- a) (i) Explain the effects of cropping system on land Management.  
(ii) State the various water budget parameters for watershed.
  - b) Explain in detail about "Ley Farming".
  - c) Explain the different Watershed Characteristics such as
    - (i) Geological characteristics.
    - (ii) Topographical characteristics.
    - (iii) Hydrological cover.
    - (iv) Physical characteristics and slope.
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