

CSM – 6/21
Agriculture
Paper – I

Time : 3 hours

Full Marks : 300

The figures in the right-hand margin indicate marks.

*Candidates should attempt Q. No. 1 from Section – A and Q. No. 5 from Section – B which are compulsory and any **three** of the remaining questions, selecting at least **one** from each Section.*

SECTION – A

1. Answer any **three** of the following in about **200** words each : 20×3 = 60
 - (a) What is the soil fertility and productivity ? State factors affecting soil productivity, nutrient loss from soil and fertility maintenance.
 - (b) What is green manuring ? State advantages of it, crops suitable and its process of addition in soil.

- (c) What are the features of rainfed agriculture ? Define drought. Write types of drought in agriculture and prepare a contingent planning for a drought situation.
- (d) Define Conservation Agriculture (CA). Give status of CA in India and abroad. State principles followed in CA. How does it differ from intensive agriculture ?
2. Define irrigation, its objectives and critical stages of irrigation for important crops. Compare different methods of irrigations. State importance of Micro Irrigation System (MIS) in India and compare with canal irrigation and tubewell irrigation systems. State potential crops for drip and sprinkler irrigation systems. State the causes of water logging and its harmful effects in crop fields. 60
3. What are the characteristics of weed ? State crop-weed competition and menace in agriculture. Write the principles of weed management. State different erosion control farming practices-contour cropping, strip cropping, terracing and conservation tillage. 60

4. Define soil. State its weathering process, soil formation and its profile. State the criteria for essentiality of plant nutrients, functions of NPK essential plant nutrients and write deficiency symptoms of Zn, B and Mo in plants. Write nitrogenous fertilizers and state the ways to increase the nitrogen use efficiency. 60

SECTION – B

5. Write short notes on any **three** of the following in 200 words each : $20 \times 3 = 60$

- (a) State history of farm machinery development in India. Prepare operation wise improved farm machineries used in India and its impact on agriculture.
- (b) Write the importance of agricultural trade in GDP of India. Discuss about the composition of agricultural export and state its growth.
- (c) What is PRA ? Write its features and methods of assessment. What is ITK in agriculture ? State its importance.

(d) Write features of MGNREGA and RKVY towards rural employment and infrastructure development in agriculture sector.

6. What is farm management ? Write the farm management problems in India. What are the systems of farming ? State the labour management for increasing the farm labour efficiency ? Write different cost concepts widely used in crop cultivation. 60

7. State agricultural marketing, characteristics and it's problems. Write the role and functions of regulated markets. Give a brief physical and institutional market infrastructure status in India. 60

8. What are Characteristics of Ecosystem ? Write the components of ecosystem. What factors influence the distribution of plants ? State major ecological regions with their characteristics on the basis of soil, rainfall and crops. 60

