

AGRICULTURE (Paper I)

Time Allowed : Three Hours

Maximum Marks : 250

QUESTION PAPER SPECIFIC INSTRUCTIONS

(Please read each of the following instructions carefully before attempting questions)

There are EIGHT questions divided in two Sections.

Candidate has to attempt FIVE questions in all.

Question Nos. 1 and 5 are compulsory and out of the remaining, any THREE are to be attempted choosing at least ONE question from each Section.

The number of marks carried by a question/part is indicated against it.

Wherever any assumptions are made for answering a question, they must be clearly indicated.

Word limit in questions, wherever specified, should be adhered to.

Attempts of questions shall be counted in sequential order. Unless struck off, attempt of a question shall be counted even if attempted partly. Any page or portion of the page left blank in the Question-cum-Answer Booklet must be clearly struck off.

SECTION 'A'

1. Answer the following questions in about 150 words each: **10×5=50**
- (a) Why is watershed management important in dryland agriculture?
 - (b) How is soil erosion caused?
 - (c) Discuss the farm management problems in the Indian context.
 - (d) How is 'contract farming' playing an important role in agrifood chain in the Indian context?
 - (e) How are the agro-climatic zones determined?
2. (a) Elaborate the environmental pollutions along with the role of afforestation in minimizing their effects. **20**
- (b) Discuss about the factors affecting the efficacy of herbicides. **20**
- (c) How does soil acidity affect the crops? **10**
3. Differentiate and elaborate the following: **10×5=50**
- (a) Integrated nutrient management and Integrated pest management
 - (b) Intensive agriculture and Sustainable agriculture
 - (c) Agroforestry and Agrostology
 - (d) Frontline demonstration and Method demonstration
 - (e) Lime requirement and Leaching requirement
4. (a) Discuss nitrogen transformation and its management in submerged soil for rice production. **20**
- (b) Write about the needs and techniques of forage conservation. **15**
- (c) Write the approaches of biological weed control with suitable examples. **15**

SECTION 'B'

5. Answer the following questions in about 150 words each: **10×5=50**
- (a) Describe the agricultural regions of India.

- (b) What benefits are derived from organic matter in soil?
 - (c) Elaborate the problems of residual toxicity of herbicide and its management.
 - (d) Detail the role of co-operative marketing.
 - (e) What is the importance of Krishi Vigyan Kendra (KVK) in the context of rural livelihood?
6. (a) Give the criteria of essentiality of plant nutrients. List the essential mineral elements required in plant nutrition. State the principal functions of N, P, K, Ca, Mg and S. 20
- (b) Write the concept of soil moisture constraints. Write the role and availability of moisture to plants. 15
- (c) Explain multiple cropping, its significance and constraints experienced by farmers. 15
7. (a) Is curing in tobacco beneficial? Describe the various curing processes adopted in tobacco growing regions of India. 20
- (b) Explain El Nino effect, its causes and impact on Indian agriculture. 15
- (c) Why is Broad Based Extension (BBE) multidirectional? What difficulties arise in its implementation? 15
8. (a) Elaborate the ways to increase fertilizer use efficiency. 20
- (b) Why is crop diversification more beneficial than traditional monoculture system? 20
- (c) Compare direct seeding and transplanting of rice. 10