

1[CCE.M]1

Agriculture-I

(01)

Time : Three Hours

Maximum Marks : 300

INSTRUCTIONS

- (i) Answers must be written in English.
- (ii) The number of marks carried by each question is indicated at the end of the question.
- (iii) The answer to each question or part thereof should begin on a fresh page.
- (iv) Your answers should be precise and coherent.
- (v) The part/parts of the same question must be answered together and should not be interposed between answers to other questions.
- (vi) Candidates should attempt question no. **1** which is compulsory and any **four** more out of the remaining questions.
- (vii) If you encounter any typographical error, please read it as it appears in the text book.
- (viii) Candidates are in their own interest advised to go through the General Instructions on the back side of the title page of the Answer Script for strict adherence.

- (B) Define organic farming and discuss key principles of organic farming system in detail. 55
7. (A) Answer the following in brief (any **five**) :
- (1) State the influence of radiation on plant growth.
 - (2) Mention the after care operation of transplanted paddy and ground nut.
 - (3) Explain stale bed technique.
 - (4) Classify the minerals on the basis of chemical composition.
 - (5) Give characteristics of contours.
 - (6) What are the stages of gully development ? Explain in brief.
 - (7) Give components of market.
 - (8) What do you understand by annual price fluctuations ?
- (B) Discuss importance of agricultural marketing in economic development of India. 55
8. (A) Write short notes on the following (any **five**) :
- (1) Drip irrigation
 - (2) Weed menace in agriculture
 - (3) Soil profile

- (3) Manures and Fertilizers
 - (4) Monocropping and Intensive cropping
 - (5) Mixed cropping and Intercropping
 - (6) Saline and Sodic soils
 - (7) Procurement price and Minimum support price
 - (8) Formal education and Informal education.
- (B) Enlist different soil characteristics which affect the nutrient use efficiency. Explain any one of them in detail with scientific justification. 55
3. (A) Explain the following (any **five**) :
- (1) Desirable characteristics of farm forest tree species
 - (2) Benefits of farm forestry
 - (3) Methods of herbicide application
 - (4) Soil forming factors
 - (5) Mechanical methods to reclaim salt affected soils
 - (6) Sources of soil heat
 - (7) Objectives of agricultural price policy
 - (8) Factors affecting cost of marketing.
- (B) What is weed control ? Give special characteristics of weeds. 55

4. (A) Justify the following statements giving scientific reasons (any **five**) :

- (1) Tillage is an essential evil.
- (2) Intercropping is advisable in dry farming regions.
- (3) Pulses require higher dose of phosphorus.
- (4) Organic farming is better than conventional farming.
- (5) Harvesting of green gram is carried out in the early morning hours.
- (6) Trimming of root system is done just before planting.
- (7) Capillary water is more important than gravitational water in agriculture.
- (8) Nitrogen should be applied in split doses.

(B) Differentiate between marginal and small farmers. What are major problems associated with these farmers in adoption of modern agricultural technologies for enhancing agriculture production in India ? 55

5. (A) Explain the following terms (any **ten**) :

- (1) Consumers surplus
- (2) Over adoption
- (3) Chemotype weeds
- (4) Coppicing

- (5) Calcareous soil
- (6) Strip cropping
- (7) Marginal product
- (8) Ranch farming
- (9) Cation exchange capacity
- (10) Marketing cost
- (11) Antidote
- (12) Flow resources.

(B) Define dryland agriculture and suggest the technology to mitigate adverse effect of aberrant weather. 55

6. (A) Describe in tabular form, the scientific package of practices for the following crops :

Package	Transplanted Rice	Maize	Cotton	Oats
Seed rate (kg/ha)				
Spacing (cm)				
Recommended dose of fertilizers (NPK & Zn kg/ha)				
Weed control (Name of herbicide and dose kg/ha)				
Major insects and pests				
Yield (kg/ha)				

- (ix) No continuation sheets shall be provided to any candidate under any circumstances.
- (x) Candidates shall put a cross (X) on blank pages of Answer Script.
- (xi) No blank page be left in between answer to various questions.

1. (A) Define environmental pollution. What are major ill effects of environmental pollution on crops productivity, animals and human health in context of Indian scenario ?

(B) Explain the following (any **five**) :

- (1) Distress sale
- (2) Soil health
- (3) Trace/minor elements
- (4) Sprinkler irrigation
- (5) Water use-efficiency
- (6) Lab to land programme on farmers' fields
- (7) Bio fertilizers.

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2. (A) Differentiate between the following (any **five**) :

- (1) Earthing up and Puddling
- (2) Cereals and Millets

- (4) Role of organic matter in soil
- (5) Farm management process
- (6) KVK
- (7) Crop planning in relation to soil fertility.

(B) Define evaluation and explain importance of evaluation in effective programme planning. 55