

1.F.S-2009

Sl. No. 5375

B-JGT-J-BHA

## AGRICULTURE

### Paper I

Time Allowed : Three Hours

Maximum Marks : 200

### INSTRUCTIONS

*Candidates should attempt questions 1 and 5 which are compulsory, and any THREE of the remaining questions selecting at least ONE question from each Section.*

*The number of marks carried by each question is indicated at the end of the question.*

*Answers must be written in ENGLISH.*

### Section - A

1. Write critical comments on any *four* of the following, each not exceeding 150 words :

10×4=40

- (a) Plant ecology.
- (b) Criterion of essentiality of nutrient.
- (c) Non symbiotic N-fixation.
- (d) Precision agriculture.
- (e) System of rice intensification.

(Contd.)

2. Define intercropping. Mention the types of intercropping systems in field crops with suitable examples. Enlist the criteria for evaluation of intercropping system. Discuss the most suitable criterion of evaluation under Indian conditions.

40

3. Describe in tabular form the package of practices for the following crops : 2×5×4=40

<i>Package</i>	<i>Summer planted sugarcane</i>	<i>Late sown wheat</i>	<i>Chickpea</i>	<i>Oat</i>
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Major growing regions

Seed rate  
(kg/ha)

Spacing (cm)

Fertilizer dose  
(kg/ha)

Nitrogen

Phosphorus

Potassium

Sulphur

Yield (kg/ha)

4. Define integrated weed management (IWM). Suggest IWM for rice-wheat rotation; sugarcane-mustard and groundnut-pigeon-pea system. 40

**Section - B**

5. Differentiate between the following in not more than 150 words each. Attempt any *four*.  $10 \times 4 = 40$
- (a) Fertilizer-use-efficiency and fertilizer-utilization efficiency.
  - (b) Allelopathy in crop production.
  - (c) Diversified farming and mixed farming.
  - (d) Plasticity of crops.
  - (e) Partial and complete budgeting.
6. (a) Explain the characteristics of different problem soils and suggest ways of reclamation. 20
- (b) Write short notes on :  $10 \times 2 = 20$
- (i) Reasons of low yield in pulses and oil-seeds.
  - (ii) Maximum and economic yield.
7. Define irrigation and water use efficiency. Explain the criterion of scheduling irrigation in field crops. Enlist the different methods of irrigation in field crops with merits and demerits of each. 40

8. Write short notes on the following, each not exceeding 150 words.  $10 \times 4 = 40$

- (a) Farm planning.
- (b) Measures to improve the agricultural marketing in India.
- (c) Importance of training for extension workers.
- (d) Result and method demonstration.