Civil Services (Main) Examination, 2002

AGRICULTURE

(Paper II)

Time Allowed : Three Hours **Maximum Marks : 300**

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.
All questions carry equal marks.
Wherever any assumptions are made for answering a question, they must be clearly indicated.
Word limit in questions, wherever specified, should be adhered to.

SECTION 'A'

1. Answer any three of the following in about 200 words each:

(a) Define dichogamy. Describe in brief protogyny and protandry.

(b) What is self-incompatibility? Describe in brief the mechanism of self incompatibility.

(c) What is biometry? Discuss the usefulness of biometrical techniques to the plant breeders.

(d) Define hybridization. Describe in-brief the various types of hybridization.

2. (a) Describe in brief emasculation and discuss the various methods of emasculation.

(b) What is inbreeding? Discuss in brief the effects of inbreeding.

(c) Define mass selection. Explain the procedure of mass selection and discuss its merits and demerits.

3. (a) Briefly describe the bulk method of breeding and its applications in crop improvement programme.

(b) Discuss in brief the progeny selection and describe its merits and demerits.

(c) Define and discuss plant growth regulators and their use in agriculture.

4. Write short notes on the following:

(a) Transgenic plants

(b) Pheromones

(c) Disease complex of cotton

SECTION 'B'

5. Answer any three of the following in about 200 words:

(a) Define and discuss insecticide resistance management (I. R. M.) for a pest.

(b) Define Grain storage and describe integrated pest management of a storage pest.

(c) Discuss in brief the package of practices for the cultivation of tomato.

(d) Briefly describe the Indian Seed Act (1966).

6. Describe the nature of damage, life history and management of following insect-pests and diseases:

(a) Melong fruit fly

English version compiled from published transcriptions and cross-checked across sources; not a facsimile of the official UPSC question paper.

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(b) Spotted ball worm of cotton

(c) Rice Tungro Virus

7. **(a)** List the various international agencies and institutes concerned with the improvement of agriculture production. Briefly describe the objectives and functions of any two of them.

(b) Give an account in brief on Genetically Modified Crops.

(c) Discuss in brief the post harvest losses in fruits and vegetables, and the measures to minimize these losses.

8. Write short notes on the following:

(a) Carbamate insecticides

(b) Methods of raising ornamental plants

(c) Neem in pests control

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