

AGRICULTURE (Paper I)

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.

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.

SECTION 'A'

1. Write short notes on any three of the following in about 200 words each: **20×3=60**
- (a) Biological methods of weed control
 - (b) Potential evapotranspiration
 - (c) Mineralogical organisation of silicate clays
 - (d) Modernisation in agriculture & environmental pollution
2. What are the causes of water logging in our country? How are the soil and crop productivity affected by it? Suggest methods of prevention to enhance agricultural production. **60**
3. Write the nitrogen transformation processes in soils. What changes does nitrogen undergo regarding losses and availability? Why are legume crops beneficial in nitrogen fixation? **60**
4. Give in tabular form sowing time, seed rate, spacing, fertilizer, irrigation and average yield in India of jowar, sunflower, peas, soyabean, mustard and groundnut for higher production. **60**

SECTION 'B'

5. Write short notes on any three of the following in 200 words each: **20×3=60**
- (a) Lab to land programme
 - (b) Soil profile
 - (c) Agro forestry
 - (d) Sprinkler irrigation system
6. What are the essential elements required for the growth of higher plants? Write the role of trace elements. How is the availability of these affected in varying soil conditions? **60**
7. Differentiate between management of a farm and farm management. How is farm management useful to farmers of our country? What is the scope of farm management on small farms? **60**
8. What are the difference between formal education and extension education? Which are the extension methods employed to introduce new agricultural technologies for the farming community? Write the beneficial effects of extension for increasing agricultural production. **60**