

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. Answer the following in about 150 words each:
12×5=60
 - (a) Name the important minerals found in different rocks. Describe chemical weathering of soil.
 - (b) What is crop-weed competition? Give principles of integrated weed management.
 - (c) What are principal agricultural regions? Give importance of intercropping system.
 - (d) What is water harvesting? Why in modern-day agriculture is it becoming increasingly significant?
 - (e) Why are agroecosystems losing diversity? Give characteristics of crop-land ecosystem.
2. Answer the following in about 200 words each:
15×4=60
 - (a) What is the difference between modern and sustainable agriculture? Give resource management for sustainable agriculture.
 - (b) What is subsistence agroforestry system? Describe Taungya cultivation.
 - (c) What do you understand by degraded land? Discuss the strategies for rehabilitation of such land.
 - (d) Briefly discuss different aspects of integrated nutrient management and its limitations.
3. Differentiate between the following:
15×4=60
 - (a) Cropping system and Cropping pattern
 - (b) Intensification and Diversification of agriculture
 - (c) Chelates and Boron carriers
 - (d) Krishi Vigyan Kendra and Agricultural Technology Information Centre
4. Answer the following in about 200 words each:
15×4=60
 - (a) Describe technology assessment and refinement through institution-village linkage programmes.
 - (b) What are the factors of herbicide selectivity? Briefly discuss about selective herbicides for rice and wheat.

- (c) What is permanent wilting point (PWP)? Describe surge-flow irrigation.
- (d) Briefly discuss about soil management under water stress condition.

SECTION 'B'

5. Write short notes on the following in about 150 words each: **12×5=60**
- (a) Soil factors affecting greenhouse gases emission
 - (b) Steps in farm planning and budgeting
 - (c) Conservation furrow
 - (d) Value addition in agriculture
 - (e) Emerging concepts of transfer of technology
6. Answer the following in about 200 words each: **15×4=60**
- (a) Describe the factors responsible for soil erosion and agronomic measures to control it.
 - (b) Briefly discuss about runoff harvesting and recycling on watershed basis.
 - (c) What are the major problems of agricultural marketing in India?
 - (d) Discuss about indigenous technical knowledge (ITK) and its importance.
7. Differentiate between the following: **15×4=60**
- (a) Water distribution efficiency and Water use efficiency in agriculture
 - (b) Bio-drainage and Horizontal drainage
 - (c) Self-help groups and Farmer interest groups
 - (d) Result demonstration and Method demonstration
8. Answer the following in about 200 words each: **15×4=60**
- (a) Describe the potassium fixation in soil and factors affecting it.
 - (b) What is private extension? Give agencies involved in this type of technology dissemination.
 - (c) What is farm budgeting? Discuss different types of farm budgeting.
 - (d) What is water quality classification? Describe the hazards arising out of water quality.