

AGRICULTURE

Paper—I

Time Allowed : Three Hours

Maximum Marks : 200

QUESTION PAPER SPECIFIC INSTRUCTIONS

Please read each of the following instructions carefully before attempting questions.

There are **EIGHT** questions in all, out of which **FIVE** are to be attempted.

Question no. **1** and **5** are compulsory. Out of the remaining **SIX** questions, **THREE** are to be attempted selecting at least **ONE** question from each of the two Sections A and B.

Attempts of questions shall be counted in chronological order. Unless struck off, attempt of a question shall be counted even if attempted partly. Any page or portion of the page left blank in the answer book must be clearly struck off.

All questions carry equal marks. The number of marks carried by a question / part is indicated against it.

Answers must be written in **ENGLISH** only.

SECTION—A

Q.1. Write critical comments on the following :

5×8=40

- Q. 1(a) What is water use efficiency ? Discuss the future demands and availability of water in the context of climate change. 8
- Q. 1(b) What is area of salt affected soils in India ? What are its causes and method of reclamation ? 8
- Q. 1(c) What is global warming ? What are effects of global warming on cropping pattern in India ? 8
- Q. 1(d) What do you mean by quality agricultural inputs ? What are problems of timely availability of quality inputs in India and its assurance mechanism ? 8
- Q. 1(e) What is crop planning ? Describe the method of crop planning in rainfed areas of India. 8

Q.2. Describe in detail :

4×10=40

- Q. 2(a) What is agricultural diversification ? Discuss the scope of agricultural diversification, its importance and factors responsible for it. 10
- Q. 2(b) What is Technology Mission on oil seeds ? Describe its role in production of oil seed crops and enhancing self sufficiency in edible oils. 10
- Q. 2(c) What are the plant nutrients ? Describe the deficiency symptoms of NPK and integrated nutrient management in crops. 10
- Q. 2(d) What is entrepreneurship development ? Describe the profile of entrepreneurs, importance and scope of entrepreneurship development in India. 10

Q.3. Write short note on the following :

5×8=40

- Q. 3(a) What is GM technology ? Discuss its effects on food and fiber crops in terms of human health. 8
- Q. 3(b) What is tissue culture ? How is it different from conventional method of plant propagation ? What is its significance in present context ? 8
- Q. 3(c) What do you mean by multiple cropping ? Describe the advantages and disadvantages of multiple cropping. 8
- Q. 3(d) What is integrated pest management ? What are its aims, advantages and techniques ? 8
- Q. 3(e) Describe the process of phosphorus fixation in the soils. 8

Q.4. Discuss the following in detail :

4×10=40

- Q. 4(a) What are weeds ? Classify the weeds and discuss the method of Biological control. 10
- Q. 4(b) What is social forestry ? How does it work ? Describe its advantages to the society. 10
- Q. 4(c) What do you mean by soil erosion ? Discuss its different types and procedure of soil erosion management. 10
- Q. 4(d) What do you understand by loss of Nitrogen ? How is the loss of Nitrogen in waterlogged soils controlled ? 10

SECTION—B

Q.5. Write note on the following :

5×8=40

- Q. 5(a) What is NAIP ? Describe its impact on Indian agricultural research 8
- Q. 5(b) What is MNREGA ? Discuss the significance of MNREGA on rural poor and effect on migration. 8

- Q. 5(c) What do you mean by transaction cost ? Discuss the innovations in the delivery of farm credit. 8
- Q. 5(d) Define contract farming. Discuss its importance and scope in India as farm sizes are very small. 8
- Q. 5(e) What are cooperatives ? Discuss the reasons of their success and failure. 8
- Q.6. Differentiate between the following : 5×8=40**
- Q. 6(a) Formative and Summative Evaluation. 8
- Q. 6(b) ATMA and KVK. 8
- Q. 6(c) Organic and Inorganic agriculture. 8
- Q. 6(d) Minimum Tillage and Zero Tillage. 8
- Q. 6(e) Benefit and Cost ratio. 8
- Q.7. Describe the following in brief : 4×10=40**
- Q. 7(a) Objectives and mechanisms of protection of intellectual property in agricultural sciences. 10
- Q. 7(b) What is climatic change ? What are the causes and impacts of climatic change on Indian agriculture ? 10
- Q. 7(c) What do you understand by transfer of technology in the field of agriculture ? What are the evolving concepts and approaches for transfer of technology in India ? Discuss their impact on adoption of technologies. 10
- Q. 7(d) What do you mean by farming system research ? Describe the scope and importance of farming system research for sustainable development. 10
- Q.8. Explain the following in detail : 2×20=40**
- Q. 8(a) What are challenges faced by marginal and small farmers in India ? What are the policy measures adopted by the government for their development ? 20
- Q. 8(b) What is gender mainstreaming in agricultural development ? Discuss the strategy for gender mainstreaming. 20