HPAS (Main)—2017
AGRICULTURE
Paper I

Time : 3 Hours
Maximum Marks : 100

Note :— Attempt any Five questions including Question No. 1, which is compulsory. All questions carry equal marks. Answers should be brief and to the point.

प्रश्न संख्या 1 (जो अनिवार्य है) सहित किन्हीं पाँच प्रश्नों को हल कीजिए। सभी प्रश्न के अंक समान हैं। उत्तर संक्षिप्त एवं प्रासंगिक होने चाहिए।

1. Write short notes on the following : 20

(a) Food grain production and agriculture growth in India

(b) Integrated farming system

(c) System of rice intensification

(d) Participatory Rural Appraisal

(e) Shifting or Jhum cultivation.

P.T.O.
2. 

(a) From an agriculture perspective, describe key environmental problems and discuss their impact on agriculture.

(b) What do you understand by greenhouse gases? How can these emissions be mitigated to reduce their impact on agriculture?
3. (a) Describe the water quality parameters that are considered for irrigation.
(b) Give major problems that are created because of use of water of poor quality in agriculture.

4. Describe agronomic and mechanical measures for conservation of natural resources of land and water, and enhanced crop and biomass productivity of agricultural lands.

5. (a) What are the challenges faced by farm specialist? Describe the steps in farm planning and budgeting.

P.T.O.
What is farm budgeting? Describe various steps in farm planning and budgeting.

Give a brief description of some of the commonly used extension methods by extension workers. How Krishi Vigyan Kendra (Farm Science Centers) serve vocational skill training needs of farmers and field level skill workers?
(b) Briefly describe new communication technologies and their applications in extension education. 10

प्रसार शिक्षा में नयी संचार तकनीकियों एवं उनके उपयोगों का संक्षेप में वर्णन कीजिए।

7. Describe climate and soil requirements, major cropping systems and cultivation practices of soybean, pigeonpea and maize. 20

सोयाबीन, अरहर एवं मक्के की जलवायु एवं मूदा आवश्यकताओं, मुख्य फसल प्रणालियों तथा कृषि परंपराओं का वर्णन कीजिए।

8. (a) What are the properties and roles of organic matter and humus in the soil? Discuss role of green manuring in augmenting ‘N economy’. 10

मूदा में कार्बनिक पदार्थ एवं खाद मिट्टी के क्या-क्या गुण एवं भूमिकाएं होती हैं? ‘एन अर्थव्यवस्था’ (N economy) की वृद्धि में हरी खाद की भूमिका का वर्णन कीजिए।

P.T.O.
(b) Discuss the factors affecting soil structure. Describe how macro- and micro-organisms influence different soil properties.

मृदा संरचना को प्रभावित करने वाले कारकों की चर्चा कीजिए। बृहत् एवं सूक्ष्मजीव विभिन्न मृदा गुणों को कैसे प्रभावित करते हैं, वर्णन कीजिए।