Total No. of Printed Pages—3

RP-IX-XII-4

132 AGRICULTURE 2011

SECOND PAPER

Full Marks : 200

Time : 3 hours

The figures in the margin indicate full marks for the questions

Answer **all** questions

1. List the various centres of origin of cultivated plants and some important plants that originated in them. Briefly discuss the concept of centres of origin. In what way, this concept is helpful in plant breeding? 12+5+3=20

2. What is male sterility? How does it differ from self-incompatibility? List out the various types of male sterility found in plant. Explain the inheritance of cytoplasmic male sterility and discuss its usefulness with the help of suitable examples and neat diagrams. 1+2+4+13=20

3. What are the characteristics of good seed? Briefly explain the various classes of seed. Describe in brief the procedure of certified seed production of hybrid rice. 5+5+10=20

4. What is photorespiration? State the impact of photorespiration in C_3 and C_4 plants. 5+15=20

5. What are the pathogens causing plant diseases and what are the principles of plant disease control? How will you diagnose plant disease and how will you establish that a particular pathogen is causing the disease? 5+5+5+5=20

6. Define balanced diet. How are the food groups included in balanced diet? Discuss briefly the importance of fruits and vegetables in human nutrition. 5+5+10=20

7. What are the different branches included in floriculture? How will you select grasses for preparation of lawn? Discuss the scope of floriculture as professional career. 5+5+10=20

8. Explain the mechanisms of absorption of solutes by plant root and subsequent translocation of the same to plant parts. 10+10=20

9. "Assam is a deficient State in case of oil seeds and pulses." Explain the statement. In your opinion, what are the major constraints and how would you remove these constraints to make the State self-sufficient in oil seeds and pulses? 6+5+9=20

10. Write short notes on the following : 4×5=20

(a) NETU and NEPO viruses

(b) Plant quarantine

(c) Pheromones

(d) Phytoalexins

(e) Viroids

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