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AGRICULTURE

Paper II

‘le4 DETACHABLE

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 Nos. 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 sequential 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 Question-cum-Answer Booklet 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'

1. Answer the following in about 150 words each: 8x5=40
Describe the mode of origin and growth of cell wall. 8
Define allopolyploidy. Give its applications in crop improvement. 8
Write the factors affecting seed quality. 8
Enlist the enzymes requiring metal activators. 8
Describe chemically induced male sterility. 8
2. Answer the following:
2.(a) Distinguish between epistasis and dominance. Explain gene interaction. 15
2.(b) Amongst the seed samples of a particular crop which would you recommend to
grower based on the following data? 10

Samples Germination(%) Purity(%)
A 85 98
B 88 97
C 91 96

2.(c) Discuss the cyclic and non-cyclic photophosphorylation. 1 5

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3. Distinguish between the following:
Diffusion and osmosis. 15
Sex-influenced and, sex-limited characters. 10
Synchrony in flowering and planting ratio of parents. I 5

Answer the following:
What is phytochrome ? Enlist different processes mediated by phytochrome. 15
Give the advantages of molecular markers over other genetic markers. 10
Describe the seed certification and seed quality assurance in India. 15

SECTION 'B'

5. Answer the following in about 150 words each: 8x5=40
Importance of pinching in quality production of carnation. 8
Preventive and curative methods against stored grain pests. 8
Integrated management of Fusarium and Verticillium. 8
Entomopathogenic bacteria for pest control. 8
Describe the preservation methods of important fruits. 8

6. Answer the following:
Give major insect pests of cauliflower and their management. 15
Find out the quantity of Chlorpyriphos 20EC for treating an area which requires
1000 litres of spray fluid at 0.02% strength. 10
Discuss the procurement and processing constraints of food grains 15

7. Distinguish between the following:
Olericulture and pomology. 10 ,
Mildews and blights. 15
Inoculative and augmentative releases of natural enemies. 15

8. Answer the following:
What are the critical components need adequate attention while planning an
orchard? 15
Discuss Protein-Energy-Malnutrition. 10
Discuss various methods of training in chrysanthemum. 15

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