

2021

BOTANY — HONOURS

Paper : CC-13

Full Marks : 50

The figures in the margin indicate full marks.

*Candidates are required to give their answers in their own words
as far as practicable.*

1. Answer **any five** questions from the following: 2×5
 - (a) What is 'biological clock'?
 - (b) Name one naturally occurring cytokinin.
 - (c) What do you mean by 'cavitation' and 'embolism'?
 - (d) What do you mean by vernalization?
 - (e) Mention one symptom each caused by magnesium and boron deficiency in plants.
 - (f) Write two differences between apoplastic and symplastic loading mechanisms.
 - (g) What is 'Richmond Lang effect'?
 - (h) Write two differences between primary and secondary seed dormancy.

 2. Answer **any two** questions from the following:
 - (a) Write a short note on 'P-protein'. Write one merit and one demerit of mass flow model of phloem transport mechanism in plants. 3+2
 - (b) Write the role of ABA in senescence. 5
 - (c) Describe the role of cryptochrome in photomorphogenesis. 5

 3. Answer **any three** questions from the following:
 - (a) Briefly describe the IAA mediated cell growth mechanism in plants. Write the importance of brassinolides in regulating plant growth. 5+5
 - (b) Briefly describe the different strategies of breaking seed dormancy. How does GA and ABA ratio regulate seed germination in plants? 5+5
 - (c) Write two differences between macronutrients and micronutrients. Write the importance of phosphate in plant nutrition. Briefly describe the different components of 'Hogland solution'. 2+4+4
 - (d) With illustrations describe the role of CO₂ and blue light in opening and closing of stomata. 5+5
 - (e) What is photoperiodism? Give an account of chemical nature of phytochrome. Discuss the role of phytochrome in photomorphogenesis. 2+3+5
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