

2021

BOTANY — HONOURS

Paper : CC-8

(Plant Geography, Ecology and Evolution)

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:

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| (a) Name one endemic plant each from Western Ghat and Eastern Himalaya regions of India. | 1+1 |
| (b) Distinguish between habitat and ecological niche. | 2 |
| (c) What is edge effect? | 2 |
| (d) What are metallophytes? Cite one example. | 1+1 |
| (e) What is cryopreservation? | 2 |
| (f) Define punctuated equilibrium. | 2 |
| (g) Define coevolution. | 2 |
| (h) What is adaptive radiation? Give an example. | 1+1 |

2. Answer *any two* of the following in brief: 5×2

- (a) Discuss endemism in Indian flora.
- (b) Explain phytoremediation types with examples.
- (c) Comment on the neutral theory of molecular evolution.

3. Answer *any three* of the following:

- (a) Describe the Phytogeographical regions of India according to D. Chatterjee (1960). Write brief notes on mangrove vegetation of Sunderban, India. 6+4
- (b) What is the difference between autogenic and allogenic successions? Describe the various seral stages of hydrosere with suitable illustration. 3+7

Please Turn Over

- (c) Discuss different levels of biodiversity. Comment on the *in situ* conservation of biodiversity in India. 4+6
- (d) What is speciation? Give a comparative account of sympatric and allopatric speciation. Comment on the methods of reproductive isolation. 2+5+3
- (e) Distinguish between directional and disruptive selection. Comment on the methods of sexual selection. 6+4
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