

2020
BOTANY
[HONOURS]
Paper : V

Full Marks : 50

Time : 2 Hours

*The figures in the right-hand margin indicate marks.**Candidates are required to give their answers in their own words as far as practicable.*

1. Answer any **five** questions : 2×5=10
- a) Distinguish between autecology and synecology.
 - b) What is mutualism? Cite an example.
 - c) What is meant by carrying capacity?
 - d) What is meant by endemic species? Name one such species from India.
 - e) Distinguish between manoxylic and pycnoxylic woods.
 - f) Mention two angiospermic features of *Gnetum*.

- g) What is the full form of PAN? What is its effect on environment?
 - h) What is crassulae?
2. Answer any **four** questions : 5×4=20
- a) What is ecological niche? Explain with examples the different types of niches. 2+3=5
 - b) What are the aims of plant geographical studies? Name any six phytogeographical regions of India. 2+3=5
 - c) Give an outline classification of gymnosperm as given by Stewart and Rothwell (1993). 5
 - d) Name a climbing species of *Gnetum*. Describe the ovulate organ of the genus. 1+4=5
 - e) What is meant by eutrophication? Lotic ecosystem how differ from lentic ecosystem? 2+3=5
 - f) What is edge effect? Briefly describe the inverted ecological pyramid. 2+3=5
 - g) Discuss the ecological effects of wind and precipitation on vegetation. $2\frac{1}{2}+2\frac{1}{2}=5$

3. Answer any **two** questions from the following :

10×2=20

- a) Write an essay on the Vegetation of Eastern Himalaya with reference to different altitudinal zones. Define ecotone. 8+2=10
- b) What is meant by 'Biogeochemical Cycle'? With the help of a flow chart explain nitrogen cycle. Define 'standing crop'. 2+8=10
- c) Define secondary succession. Briefly describe the different steps of succession. 2+8=10
- d) Mention the geological and geographic distribution of the *Glossopteris* plant. Draw and describe the morphological features of its different organ genera. 2+8=10
