

ACTIVITY ID 191150002

BANKURA UNIVERSITY

M. Sc. FOURTH SEMESTER EXAMINATIONS, 2020

Subject: BOTANY

Course ID: 41351

Course / Paper Code: 401C (TH)

Course Title: Ecology and Evolution

Full Marks: 15

Time: 1 Hr.

The figures in the margin indicate full marks

Answer all the questions.

1. Answer *any two* of the following questions: (1x2) = 2

- a. What are sciophytes?
- b. What is Azzi's constant?
- c. What is BOD?
- d. What is meant by ecotone?
- e. What is biogenesis?
- f. What is meant by geological time cycle?
- g. What do you mean by genetic drift?
- h. What is divergent evolution?

2. Answer *any one* of the following questions: (5x1) = 5

- a. What is soil profile? Describe in brief a generalized soil profile.
2+3 = 5
- b. What is ecological niche? Explain its different types with suitable examples
2+3 = 5
- c. Explain the process of natural selection that leads to speciation. 5

d. How does Hardy-Weinberg equation explain genetic equilibrium? 5

3. Answer any one of the following questions: (8x1) = 8

a. What is plant succession? What are the major causes of plant succession? Describe the various successional stages of hydrosere?

2+2+4 = 8

b. What is biodiversity? Describe different levels of biodiversity. Write a brief note on strategy of *in situ* conservation of biodiversity.

2+3+3 = 8

c. Describe in brief the early ideas leading to the firm establishment of the reality of evolution. 8

d. Define a population. Distinguish between allelic frequency and genotypic frequency. Describe how allelic frequency and genotypic frequency can be determined? 2+2+4=8