

BINDURA UNIVERSITY OF SCIENCE EDUCATION

FACULTY OF SCIENCE EDUCATION

DEPARTMENT OF CURRICULUM AND EDUCATIONAL MANAGEMENT STUDIES

DIPLOMA IN MATHEMATICS AND GEOGRAPHY EDUCATION

DG 008 (03): BIOGEOGRAPHY

DURATION: 3 HOURS

TOTAL MARKS: 75

INSTRUCTIONS TO CANDIDATES

1. Answer any three questions.
2. Each question should begin on a new page
3. Each question carries 25 marks.

 MAR 2024

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1. (a) Explain the following as pathways of dispersal of organisms;
 - i. Corridors, (3)
 - ii. Sweepstakes and (3)
 - iii. Filters. (3)

(b) Describe any 3 barriers that impose limits to the distribution of organisms. (6)

(c) Explain climate change as a threat to the protection of biodiversity. (10)
 2. Assess the continental drift theory as a breakthrough in explaining the disjunct biogeographic distribution of present-day organisms. (25)
 3. Discuss any five reasons why islands will contain a smaller number of species than an equivalent mainland area of similar ecology. (25)
 4. (a) Explain the importance of the following processes in terrestrial ecosystems;
 - i. Hydrological cycle (6)
 - ii. Weathering (6)

(b) Figure 1 below shows the stages in plant succession.

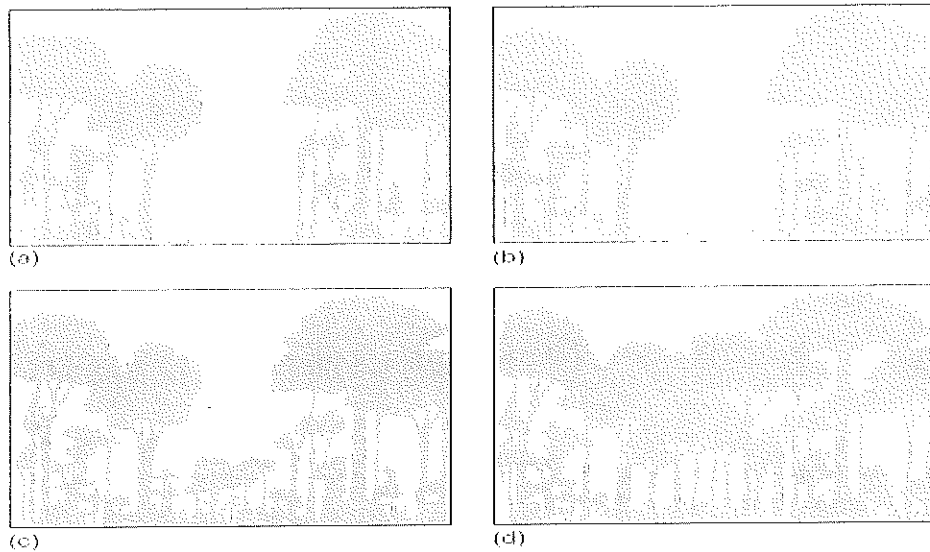


Fig 1. Plant succession in a tropical ecosystem.

- i. Define plant succession. (2)
 - ii. Describe the development of the forest through the stages (a) to (d). (8)
 - iii. Identify any 3 causes of the barren patch in stage (a). (3)
5. Evaluate the role of technology in the fight against global biodiversity loss. (25)

END OF PAPER