

BOWEN UNIVERSITY, IWO
COLLEGE OF AGRICULTURE ENGINEERING AND SCIENCE
PURE AND APPLIED BIOLOGY PROGRAMME
2021/2022 FIRST SEMESTER EXAMINATION

PAB 303: GENERAL ECOLOGY

Answer questions **one** and any two others.

Time allowed: 2 hours 20 minutes

1. (a) During a capture-recapture effort, a total of 164 catfishes was caught, marked and released back into the reservoir; a few days later, 18 out of the 258 catfishes caught were marked.
 - (i) Estimate the total population size of catfish in the reservoir. *(7 marks)*
 - (ii) Enumerate **four** critical assumptions that will make the estimate in 1(a)(i) above valid. *(8 marks)*
- (b) Briefly discuss the various causes of desertification resulting from degradation of vegetation in the natural environment. *(10 marks)*
- (c) Provide a concise list of **five** (5) apparatus required for study of population parameters in a grassland habitat. *(5 marks)*

2. (a) Discuss briefly, any **ten** levels or scales of ecological studies. *(10 marks)*
- (b) Define the terms **Population** and **Density**. *(3 marks)*
- (c) List the common and scientific names of **four** bird species and **three** primate species endemic to **Nigeria**. *(7 marks)*

3. Describe the process of succession that occurs on a rock surface from initial stage to the climax community. *(20 marks)*

4. Write short notes on the following:
 - (a) Different forms of succession that may occur in vegetation. *(4 marks)*
 - (b) Soil conditions as a limiting factor affecting vegetation development. *(12 marks)*
 - (c) Types of quadrat used in vegetation analyses *(4 marks)*

5. Write an essay on the determination of relative density of animals *(20 marks)*