

ECOLOGY: A PRACTICAL APPROACH

SYLLABUS OBJECTIVES

Candidates should be able to:

Use in the correct context the following terms:

- (i) physical and biotic factors
- (ii) environment and habitat
- (iii) population and community; E 2.1

Carry out a simple ecological study; E 2.2

Choose the most appropriate sampling methods for a particular study; E 2.3

Estimate the population density of a species using quadrats; E 2.4

Relate distribution of species to physical factors; E 2.5

CONTENT

Ecology is concerned with the study of organisms and their habitats. This includes the interdependence of various populations, their impact on each other and on their surroundings; the effect of the surroundings on their behaviour; as well as the ways in which the organisms and the environment change in response to each other. A pond and its inhabitants provides a good example of these interrelationships.

The pond contains:

- (a) soil consisting mainly of rock, minerals and dead remains of organisms;
- (b) water with minerals;
- (c) water plants of different kinds including algae;
- (d) water animals like snails, tadpoles, fish;
- (e) bacteria and other micro-organisms such as protozoa.

All these components interact to produce a system called an ecosystem which is constantly changing. An ecosystem can be divided into:

- the physical or non-living or abiotic component;
- the living or biotic component.

Water plants and algae depend on sunlight and water for life, the fish feed on the algae and small water plants, the snails live on decaying remains of organisms. The soil at the bottom of the pond gives up some of its resources to the plants and animals. The plants and animals