

SHRI GOVIND GURU UNIVERSITY, GODHRA
B.Sc. ZOOLOGY - SEMESTER-III
MULTIDISCIPLINARY COURSE (MDC) – THEORY
BS23MD3ZO1
(Fundamentals of Ecology)

Total Credit - 02

02 Lectures/Week

UNIT	TOPICS	CREDIT	HOURS
Unit-I	<ul style="list-style-type: none"> • Introduction and Branches of Ecology • Biogeochemical cycles: <ol style="list-style-type: none"> 1. Carbon cycle 2. Nitrogen cycle 3. Phosphorous cycle 4. Sulphur cycle • Biotic Community <ul style="list-style-type: none"> - Concept of community - Community stratification in terrestrial habitat • Ecological Succession <ul style="list-style-type: none"> - Kinds of succession - Process of succession - Patterns of succession (Hydrosere, Xerosere) - Significance of ecological succession 	1	15
Unit-II	<ul style="list-style-type: none"> • Marine Ecosystem: <ul style="list-style-type: none"> - Physico-chemical parameters: Light, Temperature, Pressure, Salinity, Currents and Tides - Zonation in Marine Environment - Types of coral reefs and its ecological importance • Fresh water ecosystem: <ul style="list-style-type: none"> - Characteristics: Salinity, pH, water current, transparency, dissolved gases (oxygen and carbon dioxide), pressure, density, light, temperature and thermal stratification (summer and winter) - Lentic system: Ponds - Characteristics, types, zonation; Lakes - Characteristics and types - Lotic system: Rivers - Characteristics (current, land-water interchange, and oxygen), Zonation (flowing water, rapid/riffle, pool zones) • Terrestrial ecosystems (Biomes): Tundra, Savana, Grassland, Desert and Tropical Rain Forests 	1	15

References:

1. Environmental Pollution (Popular Science), N. Manivasakan, National Book Trust, New Delhi.
2. Ecology and Environment, P. D. Sharma, Rastogi Publications, Meerut.
3. Fundamentals of Ecology, P. S. Odum, Saunders.
4. Concepts of Ecology, N. Arumugam, Saras Publication, Nagercoil.

SHRI GOVIND GURU UNIVERSITY, GODHRA
B.Sc. ZOOLOGY - SEMESTER-III
MULTIDISCIPLINARY COURSE (MDC) – PRACTICAL
BS23MD3ZO1
(Fundamentals of Ecology)

Total Credit - 02

LIST OF PRACTICALS

1. To estimate following physico-chemical parameters of pond water by titrimetric method
 - a) Acidity
 - b) Alkalinity
 - c) Total hardness
 - d) Calcium hardness
2. Study of structure of lentic and lotic ecosystem through chart
3. Study of structure of marine ecosystem through chart
4. To study types of coral reefs (fringing reef, barrier reef, atolls) through charts
5. To study various biomes using charts: Tundra, Savana, Grassland, Desert and Tropical Rain Forests