**KARIM CITY COLLEGE, JAMSHEDPUR**

**DEPARTMENT OF BOTANY**

**SYLLABUS DISTRIBUTION**

**AS PER FYUGP, NEP -2022**

**MINOR -01 SESSION (2023-2027) CREDIT-04 THEORY-03 PRACTICAL-00**

**PLANT ECOLOGY AND TAXONOMY FULL MARK-60 TIME: 3 HOURS**

**DR. AFTAB ALAM KHAN:**

**Full Mark - 60 Time: - 3 Hrs.**

**Unit I:** Introduction, Factors, Communities and Ecosystem 15 Hrs. Soil:

Origin, formation, composition, soil profile. Water:--States of water in the

environment Adaptation of hydrophytes and xerophytes. Succession:

processes and types. Structure, trophic organization; energy flow; food chains

and food web. Ecological pyramids. Gross and net productivity. Biogeochemical

cycles of carbon and nitrogen.

**Unit II:**  Phytogeography, Introduction to Plant Taxonomy 20 Hrs.

Bio geographical zones and Endemism. Plant Taxonomy: -- Description,

Identification, Nomenclature and Classification. Importance of Herbarium,

Important herbaria and botanical gardens of the world and India. Ranks,

Categories and taxonomic groups, Principles and rules of International Code of

Nomenclature (ICN), binominal system.

**DR.SHARMILA CHAKRABORTY:**

**UNIT-I:**

Phytogeography, Introduction to Plant Taxonomy. Bio geographical zones and

Endemism. Plant Taxonomy.

**UNIT II:**

Ranks, categories and taxonomic groups, Principles and rules of International

Code of Nomenclature (ICN), binominal system, Typification, author citation,

valid publication, rejection of names, principle of priority and its limitations.

**Unit III:** Classification, Biometrics, Numerical Taxonomy and Cladistics Types

of classification-artificial, natural and phylogenetic. Bentham and Hooker (upto

series), Takhtajan (upto superorder). Characters; variations; OTUs, character

weighting and coding; cluster analysis; phenograms.