

VEER NARMAD SOUTH GUJARAT UNIVERSITY, SURAT

M.Sc. Biotechnology (Five years integrated course)

Semester - II

IBT: 203

Course Title: Bioscience-II

Unit-I (7 hrs)

Photosynthesis: Photosynthesis in general, Chloroplasts, Chlorophyll pigments, Light Reaction, Light harvesting complexes, Dark reaction, pathways of carbon fixation, C₃ and C₄ mechanisms.

Respiration

Plant nutrition

Unit – II (7 hrs)

Reproduction in plants: Structure and function of floral parts, fertilization, embryo formation, types, seed morphology, function, seed dormancy, germination

Growth and Development in Plants: Light and growth response, plant growth hormones, Plant growth and movements, Light and flowering.

Unit –III (7 hrs)

Internal structural organization of plants

- Tissue system
- Stelar organization
- Meristems
- Secondary growth

Unit –IV (7 hrs)

Animal Tissue System:

- Epithelial
- Muscular
- Connective
- Nervous

Unit –V (7hrs)

Functional Anatomy

- Digestive system
- Reproductive system
- Endocrine system

Unit –VI (7 hrs)

Osmoregulation and excretion:

Nervous coordination: CNS, PNS, neuron its structure and function, nerve impulse, Synapse

Muscular contraction

References:

1. Plant Anatomy – B.P.Pandey, S Chand & Co. 1994
2. Anatomy of seed plants – V.Singh & D.K.Jain, Rastogi Pub. 1987
3. Plant Physiology – Verma V. Srokon Pub.1990
4. Plant Physiology – S.N.Pandey and K.K.Singh, Vikas Pub.
5. Animal Physiology – E.L.Jordan and P.S.Verma
6. A text book of animal physiology – A.K.Berry. Emkay publications
7. Animal Physiology – M.P.Arora Himalaya Pub.
8. A Text Book of Histology – Berry A.K.