

DEPARTMENT OF ZOOLOGY

SHREE GAVISDDDESHWAR ARTS, SCIENCE AND COMMERECE COLLEGE KOPPAL



NAAC Accredited 'B' Grade

Title of the Course: Certificate Course in Beekeeping

Submitted by

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Department of zoology

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Beekeeping**20hrs**

UNIT – I Introduction to Apiculture - scope, importance (2 hrs)
Scope and advantages of beekeeping.

UNIT – II Honey Bee morphology, Anatomy and Life cycle (8 hrs)
Basic concepts of morphology of Honey bees (structural adaptation of mouthparts, honey sac, wax glands and sting apparatus).
Honey bee species and identification. Development of honeybee.
Species of honey bees. Social organization in honey bees: Colony life and social organization – Queen, drone, worker.

UNIT – III Bee keeping: Tools and Equipment. (5hrs)
Principles of Beekeeping and modern beekeeping methods.

UNIT – IV Honeybee Enemies and Diseases (2 hrs)
Bee enemies and diseases:

UNIT – V Economic importance (3 hrs)
Honey, wax, pollen, venom and Bee pollination.

Practicals (15 hrs)

1. Identification of Honey Bee Species.
2. Identification of different Castes of Honey Bees.
3. Identification of different body parts of honey bees.
4. Life Cycle Of Honeybees
5. Beekeeping Equipments
6. Bee Colony Inspection

References

1. Graham, J M (1992) The hive and the honey bee. Dadant and Sons, Hamilton, Illinois.
2. Mishra R.C. (1995) Honey bees and their management in India. ICAR Publication, New Delhi.
3. Singh, S. (1971) Beekeeping in India, ICAR publication.
4. *Bee World*, Woodside House, Chalfont Heights, Gerrands Cross, Bucks, England.
5. *Journal of Apicultural Research*, Woodside House, Chalfont Heights, Gerrands Cross, Bucks, England.