

MOHANLAL SUKHADIA UNIVERSITY, UDAIPUR

B. Sc. BIOTECHNOLOGY I YEAR TDC (2016-17)

B. Sc. Ist Year Practicals

Practical – I

(A) Plant Biology and Diversity

Study of thallus structure and reproduction in following organisms

Algae	: <i>Nostoc, Volvox, Ulothrix, Spirogyra</i>
Fungi	: <i>Albugo, Penicillium, Alternaria</i>
Bryophytes	: <i>Riccia, Marchantia</i>
Pteridophytes	: <i>Pteridium</i> (Stem and leaf only)
Gymnosperms	: <i>Cycas</i> (Rachis and leaf coralloid root)

Description in semi-technical terms the members of the following families

Crucifereae (Brassicaceae)	<i>Brassica, Iberis, Raphanus</i>
Malvaceae	<i>Hibiscus, Althea</i>
Papilionatae	<i>Crotolaria, Pisum</i>
Caesalpinoideae	<i>Caesalpinia, Cassia</i>
Compositae (Asteraceae)	<i>Helianthus, Tridax</i>
Solanaceae	<i>Datura, Petunia</i>
Liliaceae	<i>Asphodelus, Allium</i>

Study of different types of placentation

Axile, Parietal, Basal, Marginal, Free central

Study of pollen viability and germination (*Calotropis*- pollinia)

Types of ovules in angiospermic plants

Embryo dissection – e.g. *Crotolaria*

Permanent slides – Megasporogenesis and Microsporogenesis

Economic Botany of the following:

Wheat, Maize, Sorghum, Pigeonpea, Chickpea, Potato, Onion, Mango, Banana, Sugarcane, Groundnut, Mustard, Ginger, Turmeric, Tea, Coffee, *Cinchona*, Opium poppy, *Withania*, Cotton, Jute.