

Bhakta Kavi Narsinh Mehta University, Junagadh



BOTANY SEMESTER – III

INFORCE FROM JUNE – 2017

Syllabus of Semester – III (S.Y. B.Sc.) Botany

This curriculum consists of two theory papers and two practical. Syllabus has been divided in to two semesters (i.e. semester – III and IV). Students have to study one paper in each semester and two practical based on theory papers. The course is to be completed by assigning six periods for each theory and six periods for each practical per week. Practical periods are inclusive of field study.

Pattern of Examination:

Students will have to attend theory and practical both during the semester and at the end of semester, University exams will be conducted. Examination contains 70% external and 30% internal marks. A student's performance during every practical session is assessed and marks for a maximum of 15 is recorded. External practical evaluation will carry 35 marks, so total 50 marks for each practical per paper examination will be counted. Internal assessment for theory can be following any one as mention below.

Sr. No.	Pattern of Internal Exam	Marks
A	Assignments	10
	MCQ Written Test	10
	Seminar/ presentation	10
OR		
B	MCQ Written Test	30
OR		
C	Assignments	10
	MCQ Written Test	20
OR		
D	Seminar/ presentation	10
	MCQ Written Test	20

**SKELETON OF THEORY EXAMINATION
(SEMESTER – I to VI)**

Paper Style for All Semester

1. The syllabus consists of five Units.
2. All Units carry equal marks.
3. There should be five questions in a question paper.
4. One question is to be asked from each Unit.
5. Each question carries 14 marks.
6. Time duration of 70 marks question paper is 2:30 hours.
7. Each question should be divided into a, b and c as shown below.
 - a. Answer the following. (Any one out of Two)----- (07 marks)
(Theory Question)
 - b. Attempt any one. (Out of Two)----- (04 Marks)
(Application/Example/Problem/Theory)
 - c. Attempt any three. (Out of Five) ----- (03 Marks)
(short answer/one word/one line/true or false/fill up the blanks)

Total Scheme of evaluation

Semester	Theory			Practical		
	Internal	External	Total	Internal	External	Total
I	30	70	100	15	35	50
II	30	70	100	15	35	50

Minimum requirements of plant material and Instruments for Botany Practical based on

Paper B - 301 and Paper B - 401

- Use of one micro scope for two students in practical batch
- Fresh plant material as well preserve material as per syllabus
- Different types of stain for slide preparation
- Charts for life cycles
- Original plant / Photographs / charts for Medicinal plants.
- Different types of stain for slide preparation
- Paper chromatography chamber and their equipment's & Chemicals
- Twig of plant and charts for Families

New Theory Syllabus (CBCS) for Semester - III

In forced from June – 2017

BOTANY PAPER – 301

(PLANT DIVERSITY – 2)

UNIT – I : ALGAE

- I.1 Ultra structure of Eukaryotic algal cell.
- I.2 Ranges of Thallus Structure.
- I.3 Life history of the following genus (Excluding development)
 - (a) *Nostoc*
 - (b) *Batrachospermum*
- I.4 Algae causing biological disturbances.

UNIT – II : FUNGI

- II.1 Ultra structure of fungal cell.
- II.2 Life history of the following genus (Excluding development) (Classification according to Ainsworth)
 - (a) *Aspergillus*
 - (b) *Saccharomyces*
- II.3 Industrial applications of above mention species.

UNIT – III : BRYOPHYTA

- III.1 Vegetative reproduction in Bryophytes.
- III.2 Life history of the following genus (Excluding development)
 - (a) *Marchantia*
 - (b) *Funaria*
- III.3 Economic importance of Bryophytes.

UNIT – IV : PTERIDOPHYTA

- IV.1 Life history of the following genus (Excluding development)
 - (a) *Sellaginella*
 - (b) *Adiantum*
- IV.2 Heterospory and seed habitat.
- IV.3 Types of stele and stellar evolution.
- IV.4 Telome Theory.

UNIT – V: GYMNOSPERM AND ANGIOSPERMS

V.1 Embryogeny and life history of *Pinus*.

V.2 Study of following plants families with 2 – 3 plants belonging to the families with reference to classification system of Bentham & Hooker's

(A) Dicotyledons

(1) Fabaceae

(3) Combretaceae

(5) Verbenaceae

(2) Apiaceae

(4) Euphorbiaceae

(6) Acanthaceae

(B) Monocotyledons

(1) Commelinaceae

(2) Amaryllidaceae

Semester – 3 (S. Y. B.Sc.)

BOTANY PRACTICAL: P - 301

(Based on paper – 301-P)

1. Study of algal genera with reference to the types mentioned in theory
2. Study of fungal genera with reference to the types mentioned in theory
3. Study of Bryophytes genera with reference to the types mentioned in theory
4. Study of Pteridophytes genera with reference to the types mentioned in theory
5. Study of Gymnosperms genera with reference to the types mentioned in theory
6. Families are to be studied with the help of available plants as per theory.
 - ❖ A twig of plant with flower / inflorescences
 - ❖ Whole flower (various plants)
 - ❖ L.S. of flower
 - ❖ T.S. of flower
 - ❖ Floral formula
 - ❖ Floral diagram
 - ❖ Botanical names
7. Study of various steles by section cutting.