

MAGADH UNIVERSITY

BODH-GAYA



COURSES OF STUDIES

FOR

**B. Sc. Honours/Subsidiary & General Part I,
II & III Examination**

in

BOTANY HONOURS 1996-98 onwards

PRICE Rs. 10/-

Magadh University

COURSES OF STUDY

FOR

B. Sc. BOTANY (Honours)

PART—I

EXAMINATIONS, for the Session 96-98 onwards

There shall be two theoretical papers (Paper I and Paper II). each carrying 75 marks, and one practical paper carrying 50 marks in 1st year examination of Three year Integrated Degree Course.

Instructions for Paper I and Paper II.

Time—3 Hours

Marks—75

- (1) Question no. 1 will be compulsory consisting of 15 items of objective type questions covering both Group A and Group B parts of the syllabus. The objective type question will have a statement and four plausible responses marked a, b, c, and d, out of which only one will be the correct answer.

—15 Marks

- (2) Each group (A and B) will have both Short answer type questions and Long answer type questions. Candidates are required to answer both type of questions in each group.

- (3) Short answer type questions will have 8 items, out of

which 5 items are to be answered preferably in four/
five sentences. $15 \times 2 = 30$ marks

- (4) Long answer type questions will be of conventional type and one question has to be answered out of 3 options provided. $15 \times 2 = 30$ marks

PAPER - I CRYPTOGAMS

GROUP - A

- Algae**— 1 General characters and classification of algae.
2 General characteristics of Cyanophyceae with reference to *Oscillatoria* and *Rivularia*.
3 Structure and life history of the following genera with reference to alternation of generation :
Volvex, *Oedogonium*, *Coleochaete*, *Chara*, *Ectocarpus*, *Fucus*, *Batrachospermum* and *Polysiphonia*.
4 Study of Economic Importance of Algae.

- Fungi**— 1 General characters and classification of Fungi.
2 Structure and life history of the following genera :
Synchytrium, *Albugo*, *Erysiphe*, *Peziza*, *Ustilago*, *Puccinia*, and *Alternaria*.

Lichen— General Account.

GROUP - B

- Bryophytes**— 1 General characters and classification of Bryophytes.
2 Structure and life history of the follow-

ing genera with reference to comparative studies of gametophytes and sporophytes : **Marchantia, Pellia, Anthoceros, Sphagnum, and Polytrichum.**

- Pteridophytes**
- 1 General characters and classification.
 - 2 Stellar evolution.
 - 3 Structure and life history of the following :
Psilotum, Lycopodium, Selaginella, Equisetum, Marselia and Azolla.

Fossils. Study of **Rhynia, Lepidodendron and Calamites.**

PAPER - II

MICROBIOLOGY AND PLANT PATHOLOGY

GROUP—A

- 1 Historical background of microbiology.
- 2 Classification of bacteria; Modern concept of bacterial cell.
- 3 Structure and nature of TMV and Bacteriophage.
- 4 Role of microbes in biological nitrogen fixation.
- 5 Industrial importance of bacteria and fungi.
- 6 Microbial degradation of Agricultural produce in storage.
- 7 Mushroom cultivation.

GROUP—B

- 8 Role of Enzymes and Toxins in Plant Pathogenesis.

(4)

9 Symptoms, etiology and control of following diseases :

- (a) Late blight of potato.
- (b) Loose smut of wheat.
- (c) Rust of linseed.
- (d) Red rot of sugarcane.
- (e) Citrus Canker.
- (f) Tobacco mosaic virus.
- (g) Tundu disease of wheat.
- (h) Little leaf of brinjal.

10 Transmission of plant viruses and control measures

PRACTICAL PAPER

CRYPTOGAMS+MICROBIOLOGY

Time—4 Hours

Full Marks—50

1 Morphology and structural details of the forms prescribed in the syllabus and their temporary stained microscopic slide preparations,

Pteridophyta	7
Algae	5
Bryophyta	5
Lichen/Fungi	3

2 Study of bacterial and viral diseases and staining technique of Gram (+) and Gram (–) bacteria.

OR

Preparation of a solid culture medium.

(5)

OR

Technique of isolation and inoculation of fungi.

- 3 Study of local fungal disease.**
- 4 Comment upon spots (5) from the syllabus.**
- 5 Class Record.**
- 6 Viva-voce.**