(DBOT01)

Total No. of Questions : 12] **[Total No. of Pages : 1**

M.Sc. (Previous) DEGREE EXAMINATION, MAY – 2017

(Examination at the end of First Year)

BOTANY

First Year

Bio. & Div. of Algae, Bryophytes, Pteridophytes & Gymnosperms

Time : 3 Hours **Maximum Marks : 70**

SECTION – A **(5 × 6 = 30)**

Answer any Five questions from the following

Q1) Bacillariophyta

Q2) Fossil algae

Q3) Archegoniophore

Q4) Geamma cups

Q5) Siphonostele

Q6) Rhynia

Q7) Cycadeoidea

Q8) Pyconoxylic wood

SECTION – B **(4 × 10 = 40)**

Q9) a) Describe reproduction in algae.

OR

b) Write an account on the economic importance of algae.

Q10) a) Describe the development of sporophyte in Bryophyta

OR

b) Describe the structure and reproduction in Bryopsids

Q11) a) Describe the structure and reproduction in Psilotopsisda

OR

b) Write an account on classification of Pteridophytes.

Q12) a) Describe the development of female gametophyte in Gymnosperms.

OR

b) Write an account on Bennettitales.

(DBOT02)

Total No. of Questions : 12] **[Total No. of Pages : 1**

M.Sc. (Previous) DEGREE EXAMINATION, MAY – 2017

BOTANY

First Year

Systematics of Angiosperms and Plant Ecology

Time : 3 Hours **Maximum Marks : 70**

SECTION – A **(5 × 6 = 30)**

Answer any Five questions from the following

Q1) Engler and Pranle classification

Q2) Merits and demerits of Bentham and Hooker classification.

Q3) Contribution of anotomy to taxonomy

Q4) Biological magnification

Q5) Hydrological cycle

Q6) Homeostasis

Q7) Floristic regions if India

Q8) Principles of plant geography

SECTION – B **(4 × 10 = 40)**

Answer all questions

Q9) a) Describe the plant distribution in the past and present.

OR

b) Write an account on the types of vegetation.

Q10) a) Enumerate the evaluation of taxonomic categories.

OR

b) Describe the criteria for the classification

Q11) a) Describe the biogeochemical cycles with reference to Carbon and Phosphorus.

OR

b) Write an account on population interactions and natural regulation of populations.

Q12) a) Describe the water pollution, its causes, consequences and control.

OR

b) Write an account on alternate and additional energy sources.

(DBOT03)

Total No. of Questions : 12] **[Total No. of Pages : 1**

M.Sc. (Previous) DEGREE EXAMINATION, MAY – 2017

First Year

Botany

Cytology, Genetics and Plant Breeding

Time : 3 Hours **Maximum Marks : 70**

SECTION – A **(5 × 6 = 30)**

Answer any Five questions from the following

Q1) Telomere

Q2) Karyotype analysis

Q3) Heterozygotes

Q4) Allopolyploids

Q5) Pseudoalleles

Q6) Sex limited inheritance

Q7) Probability laws

Q8) Back cross method

SECTION – B **(4 × 10 = 40)**

Q9) a) Describe the significance of mitosis and meiosis.

OR

b) Write an account on Euchromation and Heterochromatin.

Q10) a) Enumerate structural and numerical alterations of chromosomes.

OR

b) Describe the evolution of major crop plants.

Q11) a) Describe the principles of mendelian inheritance.

OR

b) Write an account on sex determination mechanisms in plants and man.

Q12) a) Describe the pure line selection and mass selection.

OR

b) Write an account on clonal selection and hybridization.

(DBOT04)

Total No. of Questions : 12] **[Total No. of Pages : 1**

M.Sc. (Previous) DEGREE EXAMINATION, MAY – 2017

First Year

BOTANY

Plant Physiology and Metabolism

Time : 3 Hours **Maximum Marks : 70**

SECTION – A **(5 × 6 = 30)**

Answer any Five questions from the following

Q1) Cohesion theory

Q2) Membrane transport of proteins

Q3) Mode and action of km value

Q4) CAM pathway

Q5) Transamination

Q6) TCA cycle

Q7) Phytochrome

Q8) Heat shock proteins

SECTION – B **(4 × 10 = 40)**

Q9) a) Describe the stomatal regulation of transpiration.

OR

b) Describe the role of micro and macro nutrients and their transport by diffusion.

Q10) a) Write an account on classification and nomenclature of enzymes.

OR

b) Describe the overview of respiration in plants.

Q11) a) Describe the mechanism of Nitrogen fixation.

OR

b) Write an account on structure and functions of phospholipids.

Q12) a) Describe the physiological effects and mechanism of action of Auxins

OR

b) Enumerate photoperiodism and vernalisation.