

(DBOT01)

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M.Sc. (Previous) DEGREE EXAMINATION, MAY – 2018

First Year

BOTANY

Biology and Diversity of Algae, Bryophytes, Pteridophytes and Gymnosperms

Time : 3 Hours

Maximum Marks : 70

SECTION – A

(5 × 6 = 30)

Answer any Five questions from the following

- Q1)** Ecology of cyanophyta
- Q2)** Fossil algae
- Q3)** Thallus range in Bryophytes
- Q4)** Archegonium
- Q5)** Psilotum rhizome T.S.
- Q6)** Embryo in Lycosida
- Q7)** RLS and TLS
- Q8)** Cones in Pinus

SECTION – B

(4 × 10 = 40)

Answer all questions

- Q9)** a) Describe the life cycle patterns in Algae.

OR

- b) Describe the economic importance of Algae.

Q10) a) Describe the reproduction and evolutionary trends in Hepaticopsida.

OR

b) Compare and contrast the reproduction in Anthocerotopsida and Bryopsida.

Q11) a) Describe the stelar variation in Lycopsidea.

OR

b) Give an account of fossil Pteridophytes.

Q12) a) Describe the structure of wood in Gnetum.

OR

b) Enumerate the salient features of Bennettitales.



(DBOT02)

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M.Sc. (Previous) DEGREE EXAMINATION, MAY – 2018

(Examination at the end of First Year)

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)** Carolus Linnaeus
- Q2)** Primitive flower in Engler and Prantl system of classification
- Q3)** Intraspecific categories
- Q4)** Codes in nomenclature
- Q5)** Energy flow
- Q6)** Homeostasis
- Q7)** Floristic regions of India.
- Q8)** Alternate energy sources.

SECTION – B

(4 × 10 = 40)

Answer all questions

- Q9)** a) Describe the vegetation of Guntur and Prakasam districts.

OR

- b) Give an account of Hutchinson system of classification and add a note on its merits and demerits.

- Q10)** a) Explain the role of anatomy in resolving taxonomic disputes.

OR

b) Explain the role of phytochemistry in resolving taxonomic disputes.

Q11) a) Describe the biogeochemical cycles with reference to carbon and phosphorus.

OR

b) Describe the population interactions and their natural regulation.

Q12) a) Enumerate the salient features of endemism and continental drift.

OR

b) What are the causes and consequences of environmental pollution and how do you control it?



(DBOT03)

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M.Sc. (Previous) DEGREE EXAMINATION, MAY – 2018

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)** Prokaryotic cell
- Q2)** Nucleolus
- Q3)** Lamp brush chromosomes
- Q4)** Evolution of wheat
- Q5)** Tetrad analysis
- Q6)** Probability
- Q7)** Back cross method
- Q8)** Clonal selection

SECTION – B

(4 × 10 = 40)

Answer all questions

- Q9)** a) Describe cell cycle.

OR

- b) Describe the various banding techniques studied by you.

- Q10)** a) Give an account of structural alterations in chromosomes.

OR

b) Give an account of numerical changes in chromosomes.

Q11) a) Describe the chromosome mapping in Eukaryotes.

OR

b) How do you induce mutations and their role in plant breeding.

Q12) a) Describe the breeding methods in self pollinated crops.

OR

b) Describe the breeding methods in cross pollinated crops.



(DBOT04)

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M.Sc. (Previous) DEGREE EXAMINATION, MAY – 2018

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)** Bulk flow
- Q2)** Cohesion theory
- Q3)** Km value
- Q4)** C4 cycle
- Q5)** Nitrogen uptake and assimilation
- Q6)** b - oxydation
- Q7)** Heat shock proteins
- Q8)** Abscisic acid

SECTION – B

(4 × 10 = 40)

Answer all questions

- Q9)** a) Describe the stomatal regulation of transpiration.

OR

- b) Describe the role of micro and macro nutrients and their transportation.

- Q10)** a) Describe the mechanism of electron and proton transport in photosynthesis.

OR

b) Give an account of TCA cycle electron transport and ATP synthesis.

Q11) a) Describe the synthesis of aminoacids by reductive amination.

OR

b) Give the classification of lipids, their structure and functions.

Q12) a) Describe the phytochemical and biochemical properties of phytochrome.

OR

b) Enumerate the salient features of photoperiodism and its role in vernalisation.

