(DBOT21)

Total No. of Questions : 12] **[Total No. of Pages : 2**

M.Sc. DEGREE EXAMINATION, MAY – 2018

Second Year

BOTANY

Development Biology of Angiosperms and Ethnobotany

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

SECTION – A **(5 × 6 = 30)**

Answer any Five questions from the following

Q1) Female gametophyte

Q2) Polyembryony

Q3) Stomata

Q4) Sieve plates

Q5) Concept and scope of ethnobotany

Q6) Ethnology of tribes of Guntur and Prakasam districts.

Q7) Medicinal plants of Eastern Ghats

Q8) Traditional knowledge

SECTION – B **(4 × 10 = 40)**

Answer all questions

Q9) a) Describe the development of male gametophyte.

OR

b) Describe the structure and development of endosperm.

Q10) a) Describe the anatomy of meristems studied by you.

OR

b) Give an account of anomalous secondary growth in a dicot stem.

Q11) a) Explain the role of traditional medicine in India.

OR

b) Explain the strategies for conservation of sacred groves in Andhra Pradesh.

Q12) a) Explain the role of phytomedicine in modern medicine.

OR

b) Give an account of ethnobotanical research in different Universities of A.P.

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(DBOT22)

Total No. of Questions : 12] **[Total No. of Pages : 2**

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

Second Year

BOTANY

Microbiology, Mycology and Plant Diseases

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

SECTION – A **(5 × 6 = 30)**

Answer any Five questions from the following

Q1) Classification of bacteria.

Q2) Transmission of viruses

Q3) Justification for kingdom Mycetae

Q4) Mastigomycotina

Q5) Dispersal of plant pathogens

Q6) Indexing and forecasting

Q7) Biological control of plant diseases

Q8) Control of TMV

SECTION – B **(4 × 10 = 40)**

Answer all questions

Q9) a) Describe the types of nutrition in bacteria.

OR

b) Explain the role of bacteria in carbon and phosphorus cycles.

Q10) a) Give a general account of Basidiomycotina.

OR

b) Describe the economic importance of fungi with reference to mushroom cultivation.

Q11) a) Describe the symptoms caused by plant pathogenic fungi, bacteria and viruses.

OR

b) Explain the role of enzymes, toxins and phytoalexins in pathogenesis.

Q12) a) Describe the symptoms, etiology, epidemiology and control of smut of sugarcane.

OR

b) Describe the symptoms, etiology, epidemiology and control of diseases in rice.

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(DBOT23)

Total No. of Questions : 12] **[Total No. of Pages : 2**

M.Sc. DEGREE EXAMINATION, MAY – 2018

BOTANY

Second Year

Cell Biology and Molecular Biology

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

SECTION – A **(5 × 6 = 30)**

Answer any Five questions from the following

Q1) Vacuoles

Q2) Lysosomes

Q3) Genetics of Cancer

Q4) Structure of gene

Q5) Transformation and transduction

Q6) Chemical structure of DNA

Q7) Gene expression in eukaryotes

Q8) Chemical structure of DNA

SECTION – B **(4 × 10 = 40)**

Answer all questions

Q9) a) Describe the ultra structure of plasma membrane.

OR

b) Give an account on endoplasmic reticulum.

Q10) a) Describe the principles and applications of SEM.

OR

b) Give an account of cell signalling and its transduction.

Q11) a) Trace the evolution of gene concept.

OR

b) Give an account of DNA as genetic material.

Q12) a) Describe DNA repair mechanisms.

OR

b) Give an account of genetic code.

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(DBOT24)

Total No. of Questions : 12] **[Total No. of Pages : 2**

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

BOTANY

Second Year

Plant Biotechnology

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

SECTION – A **(5 × 6 = 30)**

Answer any Five questions from the following

Q1) Tissue culture techniques

Q2) Selection of mutants in vitro for biotic stress.

Q3) Synthetic seeds

Q4) Cell suspension

Q5) c DNA libraries

Q6) PCR

Q7) Transgenic plants

Q8) Gene transfer methods

SECTION – B **(4 × 10 = 40)**

Answer all questions

Q9) a) How do you produce haploids through anther culture?

OR

b) Write an essay on meristem culture and embryogenesis.

Q10) a) By using tissue culture as a tool how do you produce secondary metabolites?

OR

b) Describe protoplast fusion and somatic hybridization.

Q11) a) Enumerate the salient features of in vitro genetic engineering.

OR

b) Describe the different blotting techniques studied by you.

Q12) a) Explain the role of RFLP and RAPD in crop improvement.

OR

b) Describe the Agrobacterium mediated gene transfer.

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