R-6032

Total No. of Printed Pages:1

SUBJECT CODE NO:- R-6032
FACULTY OF SCIENCE AND TECHNOLOGY
M.Sc. (Sem-II) Examination April/May 2019
Botany
Plant Development and Reproduction-BOT-406

[Time: Three Hours] **[Max.Marks:80]**

Please check whether you have got the right question paper.

N.B i) Section 'A' is compulsory.
ii) Attempt any five question from Section 'B'
iii) Illustrate your answer whether necessary.

Section 'A'

Q.1 Write short notes on. 20
a) Embryo culture
b) Female gametophyte
c) Agencies of Pollination
d) Lateral roots
e) Mesophylls
f) Phloem
g) Laticifers
h) Synergids
i) Lateral Meristem
j) Corolla

Section 'B'

Q.2 Give an account on development of dicot embryo 12

Q.3 Describe the structure of embryo-sac. 12

Q.4 Explain microspore genesis in detail. 12

Q.5 Describe the differentiation of epidermis with reference to stomate & erictromes. 12

Q.6 Give detail account on phloem elements. 12

Q.7 Explain the molecular analysis SAM. 12

Q.8 Describe the process of initiation & development of roots. 12

Total No. of Printed Pages:1

SUBJECT CODE NO:- R-6048
FACULTY OF SCIENCE AND TECHNOLOGY
M.Sc. (Sem-IV) Examination April/May 2019
Botany
Genetic Engineering and Bioinformatics- BTO- 504

[Time: Three Hours] **[Max.Marks:80]**

Please check whether you have got the right question paper.

N.B i) Attempt all questions.
ii) Question no.1 is compulsory from section 'A'.
iii) Attempt any five questions from section 'B'.

SECTION 'A'

Q.1 Write Short note on:- 20

a) Transformation
b) Gene Targeting
c) Transformants
d) Markers
e) URLs
f) Gene Editing
g) Structure databases
h) BLAST
i) Sequence alignment
j) Proteomics

SECTION 'B'

Q.2 Write at length the plant regeneration system with relation to Bt. Brinjal. 12

Q.3 Explain the bacterial Transformation in Nitrogen fixers. 12

Q.4 Comment on construction of genomics 12

Q.5 Write in detail factors affecting foreign gene and DNA synthesis. 12

Q.6 Discuss the scope and limitations of internet in Data Bank. 12

Q.7 Give a general account of tree evaluation and interpretation methods. 12

Q.8 Describe in detail genomic diversity and add a note on its significance. 12

Total No. of Printed Pages:2

SUBJECT CODE NO:- R-6062
FACULTY OF SCIENCE AND TECHNOLOGY
M.Sc. (Sem-II) Examination April/May 2019
Botany
Biotechnology-BOT-407

[Time: Three Hours] **[Max.Marks:80]**

Please check whether you have got the right question paper.

N.B
1. Section A is compulsory.
2. Attempt any five questions from section B
3. Illustrate your answer whenever necessary.

Section A

Q.1 Write short notes on 20

a) Cellular culture
b) Hormones
c) Sterilizing agents
d) Morphogenesis
e) Stationary cultures
f) Hybrid
g) Tissue culture
h) In-situ conservation
i) Transgenic
j) Gene cloning

Section –B 60

Q.2 Explain in detail the plant growth hormones.

Q.3 Give a detail account on preparation of media .

Q.4 Give an account on Genome instability .

Q.5 Describe cell, with isolation of single cell & their cultural measurement .

Q.6 Discuss the role of Agrobacterium in recombinant DNA technology

Q.7 Write a detail account on protoplast isolation.

Q.8 What are techniques developed in Gene cloning.

R-6078

Total No. of Printed Pages:1

SUBJECT CODE NO:- R-6078
FACULTY OF SCIENCE AND TECHNOLOGY
M.Sc. (Sem-IV) Examination April/May 2019
Botany
Elective – A: (A) Advanced Genetics & Molecular Biology-I-523

[Time :Three Hours] **[Max. Marks:80]**

Please check whether you have got the right question paper.

N.B i) Section 'A' is compulsory.
ii) Attempt any five questions from Section 'B'.
iii) Illustrate your answer wherever necessary.

Section A

Q.1 Write note on : 20

a) Conjugation
b) Physical mutagens
c) Aminocentesis
d) DNA synthesis
e) Gene splicing
f) Genetic counseling
g) enzyme
h) acetylation
i) Ames test
j) DNA repair

Section B

Q.2 Write at length the recombination phages. 12

Q.3 Comment on the chemical mutagen with mutagenic compound. 12

Q.4 Explain in details the born errors of metabolism 12

Q.5 Define replication? Add a note on replication apparatus? 12

Q.6 Briefly comment on reverse transcription. 12

Q.7 Describe molecular basis of mutation. 12

OR

Total No. of Printed Pages:1

SUBJECT CODE NO:- R-6078
FACULTY OF SCIENCE AND TECHNOLOGY
M.Sc. (Sem-IV) Examination April/May 2019
Botany
Elective – A: (B) Plant Pathology- III-523

[Time :Three Hours] **[Max. Marks:80]**

Please check whether you have got the right question paper.

N.B
i) Attempt all questions.
ii) Section 'A' is compulsory.
iii) Attempt all questions from Section 'B'.

Section A

Q.1 Write Short Note on 20

a) Indirect Transmission
b) Forecasting
c) Viruses
d) Aflatoxins
e) Enzymes
f) Pectin esterase
g) Bio pesticides
h) Mycorhizae
i) Inoculum
j) Breeding

Section B

Q.2 Write a note on beginning of modern plant pathology in India. 12

Q.3 Explain in detail direct and indirect transmission of pathogens in plants. 12

Q.4 Comment on the process of seed bio-deterioration. 12

Q.5 Give a general account of post-harvest spoilage of grains. 12

Q.6 Describe in detail chemical methods in disease management of plants. 12

OR

R-6078

Total No. of Printed Pages:1

SUBJECT CODE NO:- R-6078
FACULTY OF SCIENCE AND TECHNOLOGY
M.Sc. (Sem-IV) Examination April/May 2019
Botany
Elective – A: (C) Taxonomy of Angiosperms-III – 523

[Time :Three Hours] **[Max. Marks:80]**

Please check whether you have got the right question paper.

N.B i) Section 'A' is compulsory.
ii) Attempt any five questions from Section 'B'.
iii) Illustrate your answer whether necessary.

Section A

Q.1 Write Short Note on 20
a) Pteridosperms
b) Gnetoles
c) Co-evolution
d) Serology
e) GPS
f) Computer
g) Classification system
h) Phytogeography
i) Center of origin
j) Molecular techniques

Section B

Q.2 Explain in details the phylogeny of coniferates. 12

Q.3 Give an account on cytonialean theory. 12

Q.4 Define fossils angiosperms. Add a note myrtles. 12

Q.5 Describe use of taxonomical tools with computer studies. 12

Q.6 Comment on the taxonomic key add a note on its construction and use of key. 12

Q.7 Write a length a recent classification of phylogeny group system. 12

OR

R-6078

Total No. of Printed Pages:1

SUBJECT CODE NO:- R-6078
FACULTY OF SCIENCE AND TECHNOLOGY
M.Sc. (Sem-IV) Examination April/May 2019
Botany
Elective – A: (D) Advanced Plant Physiology & Biochemistry-III - 523

[Time :Three Hours] **[Max. Marks:80]**

Please check whether you have got the right question paper.

N.B
i) Section 'A' is compulsory.
ii) Attempt any five questions from Section 'B'.
iii) Illustrate your answer whether necessary.

Section – A

Q.1 Write short notes on 20

a) Water potential
b) Transpiration
c) Stomata
d) Biotic factors
e) Stress
f) Dormancy
g) Herbicides
h) Compost
i) Frequency
j) RBD

Section – B

Q.2 Write a note on molecular structure of Water with its significance. 12

Q.3 Define Biotic stress. Add a note on its salinity. 12

Q.4 Describe the Biochemical changes associated with seed germination. 12

Q.5 Write at length the organic farming. 12

Q.6 Comment on the collection and tabulation of Data. 12

Q.7 Explain the significance of t. test in plot designing. 12

OR

R-6078

Total No. of Printed Pages:1

SUBJECT CODE NO:- R-6078
FACULTY OF SCIENCE AND TECHNOLOGY
M.Sc. (Sem-IV) Examination April/May 2019
Botany
Elective – A: (E) Applied Mycology-III - 523

[Time :Three Hours] **[Max. Marks:80]**

Please check whether you have got the right question paper.

N.B i) Section 'A' is Compulsory.
ii) Attempt any five questions from 'Section B'.
iii) Illustrate your answers wherever necessary.

Section – A

Q.1 Write Short notes on – 20
(a) Raw material
(b) Stock culture
(c) Mycosis
(d) Single cell protein
(e) Infection
(f) Industrial products
(g) Waste products
(h) Diastase
(i) Starch material
(j) Fermentation

Section – B

Q.2 Write at length, the role of fungi in human disease. 12

Q.3 Define 'Biomass'. Add a note on microbial products. 12

Q.4 Give a detail account of Ethanol Production. 12

Q.5 Explain the role of primary stock culture in Industries. 12

Q.6 Comment on Candidiasis. 12

Q.7 Describe the role of fungi in industrial products 12

OR

Total No. of Printed Pages:1

SUBJECT CODE NO:- R-6078
FACULTY OF SCIENCE AND TECHNOLOGY
M.Sc. (Sem-IV) Examination April/May 2019
Botany
Elective – A: (F) Biodiversity- III- 523

[Time :Three Hours] **[Max. Marks:80]**

Please check whether you have got the right question paper.

N.B i) Section 'A' is compulsory.
ii) Attempt any five questions from Section B.
iii) Illustrate your answer wherever necessary,

Section A

Q.1 Write short note on 20
a) Double fertilization.
b) Hierarchy of taxonomy
c) Phylogeny
d) Primitive characters
e) Demerits of A.P. de Candolle classification system.
f) Phenology
g) Floral characters of Asteraceae
h) Economic importance of Solanaceae
i) Taxonomic keys
j) Cryopreservation

Section B

Q.2 Comment on origin and evolution of angiosperms. 12

Q.3 Describe one of the natural system of classification that you have studied along with merits and demerits. 12

Q.4 What is character weighing? Explain qualitative and quantitative characters. 12

Q.5 Describe the family Euphorbiaceae upto floral formula and floral diagram. Write economic importance of few plants of it. 12

Q.6 What is herbarium? Write in detail about different steps used in it. 12

Q.7 Describe the family Fabaceae upto floral formula and floral diagram. Write economic importance of few plants of it. 12

Q.8 Give an account of plant inventory and exploration. 12

Total No. of Printed Pages:1

SUBJECT CODE NO:- R-6090
FACULTY OF SCIENCE AND TECHNOLOGY
M.Sc. (Sem-II) Examination April/May 2019
Botany
Plant Physiology and Metabolism-BOT-408

[Time: Three Hours] **[Max.Marks:80]**

Please check whether you have got the right question paper.

N.B
1. Section A is compulsory .
2. Attempt any five questions from section B
3. Illustrate your answer whenever necessary .

Section – A

Q.1 Write short notes on . 20
a) Transpirational pull
b) Isozymes
c) Kranz anatomy
d) Inhibition
e) Denaturation of proteins
f) Photosynthetic apparatus
g) Respiratory substrates
h) Ethylene
i) PEP carboxylase
j) Growth curve

Section – B

Q.2 Describe phloem loading and unloading with reference to mass flow hypothesis. 12

Q.3 Describe the mechanisms of enzyme action . 12

Q.4 Explain the reduction of carbon in Calvin cycle . 12

Q.5 Write an account of TCA cycle in plants. 12

Q.6 Give the classification of amino acid based on the structure and polarity. 12

Q.7 What are triglycerides? Write their properties in details. 12

Q.8 What is phytochrome ? Write a note on physiology of flowering . 12

Total No. of Printed Pages:1

SUBJECT CODE NO:- R-6105
FACULTY OF SCIENCE AND TECHNOLOGY
M.Sc. (Sem-IV) Examination April/May 2019
Botany
Elective – B: (A) Crop Genetics & Molecular Biology-IV-524

[Time: Three Hours] **[Max. Marks:80]**

Please check whether you have got the right question paper.

N.B i) Section 'A' is compulsory.
ii) Attempt any five questions from Section 'B'.
iii) Illustrate your answer wherever necessary.

"Section A"

Q.1 Write note on : 20

a) Tissue
b) Substrate
c) Commercial crops
d) Hydro Carbon
e) Alcohol
f) Organs
g) Millets
h) Transcription
i) Carriers
j) Nucleic acid

Attempt any five questions section 'B'

"Section B"

Q.2 Define enzyme? Add a note on uses of enzymes in Industries. 12

Q.3 Describe in details the productivity of crop plants with cultural practices. 12

Q.4 Explain in detail useful microbial metabolites. 12

Q.5 Give a detail account on the physiological changes with cell senescence. 12

Q.6 Comment on substrate metabolism? Add a note on Aromatic hydrocarbon. 12

Q.7 Write at length the role of Nucleic acid in cell physiology. 12

OR

Total No. of Printed Pages:1

SUBJECT CODE NO:- R-6105
FACULTY OF SCIENCE AND TECHNOLOGY
M.Sc. (Sem-IV) Examination April/May 2019
Botany
Elective – B: (B) Plant Pathology- IV-524

[Time: Three Hours] **[Max. Marks:80]**

Please check whether you have got the right question paper.

N.B i) Attempt all questions.
ii) Section 'A' is compulsory.
iii) Attempt any five questions from Section 'B'.

Section A

Q.1 Write short notes on 20

a) Pathogenocity
b) Effective diseases
c) Diseases
d) Root hairs
e) Pathogen
f) Alternaric acid
g) Metabolism
h) Sensitive
i) Pre-infection
j) Detoxification

Section B

Q.2 Write at length inter relationship of parasitism. 12

Q.3 Give a detail account on search for effective diseases control method. 12

Q.4 Define pathogenesis. Add a note on its root hairs & buds. 12

Q.5 Describe in detail the classification of phytotoxins. 12

Q.6 Comment on structural & chemical defenses. 12

Q.7 Explain the PR-protein in pathogen interaction leading to mutation. 12

OR

Total No. of Printed Pages:1

SUBJECT CODE NO:- R-6105
FACULTY OF SCIENCE AND TECHNOLOGY
M.Sc. (Sem-IV) Examination April/May 2019
Botany
Elective – B: (C) Taxonomy of Angiosperms-IV - 524

[Time: Three Hours] **[Max. Marks:80]**

Please check whether you have got the right question paper.

N.B i) Section 'A' is compulsory.
ii) Attempt any Five Questions from Section 'B'.
iii) Illustrate your answer wherever necessary.

Section A

Q.1 Write short notes on 20
a) Nodal anatomy
b) Taxonomic characters
c) Biosystematics studies
d) PCR
e) Pineatum
f) Orchidorium
g) Micro-Satellite
h) DNA sequencing
i) RFLP
j) Bio systematic

Section B

Q.2 Explain in detail principles of Taxometrics in Numerical Taxonomy. 12

Q.3 Describe the importance of Biosystematic studies. 12

Q.4 Write at length on types of DNA sequencing data. 12

Q.5 Give the role of Botanical Gardens. 12

Q.6 Comment on the importance of Botanical survey of India. 12

Q.7 Define Molecular Biology. Add a note on Techniques in molecular biology. 12

OR

Total No. of Printed Pages:1

SUBJECT CODE NO:- R-6105
FACULTY OF SCIENCE AND TECHNOLOGY
M.Sc. (Sem-IV) Examination April/May 2019
Botany
Elective – B: (D) Advanced Plant Physiology & Biochemistry-IV - 524

[Time: Three Hours] **[Max. Marks: 80]**

Please check whether you have got the right question paper.

N.B i) Section 'A' is compulsory.
ii) Attempt any five questions from Section 'B'.
iii) Illustrate your answers whether necessary.

Section – A

Q.1 Write short notes on 20

a) Nucleic acid
b) Replication
c) Transcription
d) Aging
e) Metabolism
f) Hydrocarbons
g) Antibiotics
h) Bio catalysis
i) Integrated fertilizers
j) Commercial crops.

Section – B

Q.1 Write at length the role of DNA recombinant technology. 12

Q.2 Comment on cell senescence. 12

Q.3 Give detail account of Carbohydrate metabolism. 12

Q.4 Define Biomass. Add a note on microbial biomass production. 12

Q.5 Explain the role of enzymes in industrial processes. 12

Q.6 Describe in detail the Bio-fertilizer productivity potentials. 12

OR

R-6105

Total No. of Printed Pages:1

SUBJECT CODE NO:- R-6105
FACULTY OF SCIENCE AND TECHNOLOGY
M.Sc. (Sem-IV) Examination April/May 2019
Botany
Elective – B: (E) Applied Mycology-IV - 524

[Time: Three Hours] **[Max. Marks:80]**

Please check whether you have got the right question paper.

N.B i) Section 'A' is compulsory.
ii) Attempt any five questions from Section 'B'.
iii) Illustrate your answers wherever necessary.

Section A

Q.1 Write short notes on :- 20

1) Growth
2) Antifoaming Agents
3) Media Economics
4) Fermentation tank
5) Waste disposal
6) COD
7) Slants
8) Industrial waste
9) End-products
10) Carbon – Sources

Section B

Q.2 Write in detail the "Media Composition". 12

Q.3 Comment on the designing of Industrial fermenters. 12

Q.4 Define cultures. Add a note on its applications. 12

Q.5 Describe the biological waste management in treatment with industrial effluents. 12

Q.6 Give detail producer involved in culture maintenance in R/D laboratories. 12

Q.7 What are the steps taken in preparation of slants and Broths? 12

OR

Total No. of Printed Pages:1

SUBJECT CODE NO:- R-6105
FACULTY OF SCIENCE AND TECHNOLOGY
M.Sc. (Sem-IV) Examination April/May 2019
Botany
Elective – B: (F) Biodiversity- IV- 524

[Time: Three Hours] **[Max. Marks:80]**

Please check whether you have got the right question paper.

N.B i) Question 1 is compulsory from Section-A.
ii) Attempt any five questions from Section-B.

Section – A

Q.1 Write short notes on : 20

a) Quadrat
b) Ozone hole
c) Rare species
d) Impact of over harvesting
e) Desertification
f) Enlist any four primary greenhouse gases
g) MPCB
h) Sustainable development
i) Smog
j) Edge effect

Section – B

Q.2 Explain the concept of sustainable development. Add a note on its role in biodiversity conservation. 12

Q.3 What are the major soil pollutants? Explain its impact on Soil quality. 12

Q.4 Explain the role of NGO's in conservation of natural resources. 12

Q.5 Explain eutrophication and add a note on its effect on aquatic life. 12

Q.6 Discuss over harvesting and its impact on biodiversity. 12

Q.7 Describe in detail role of CPCB in controlling pollution. 12

Total No. of Printed Pages:1

SUBJECT CODE NO:- R-6225
FACULTY OF SCIENCE AND TECHNOLOGY
M.Sc. (Sem-III) Examination April/May 2019
Botany
Elective – B: (A) Crop Genetics & Plant Breeding-II - BOT-522

[Time: Three Hours] **[Max. Marks:80]**

Please check whether you have got the right question paper.

N.B (i) Section 'A' is compulsory.
(ii) Attempt any five questions from section 'B'.
(iii) Illustrate your answer wherever necessary.

Section – A

Q.1 Write short notes on 20

a) Efficiency
b) Hybridization
c) Man-made species
d) Heterozygous
e) Plant breeding
f) Mutation
g) Variety maintenance
h) Screening
i) Insect Resistance
j) Gene transfer

Section – B 60

Q.2 Give an account on 'Drought Resistance'.

Q.3 Explain 'quality breeding' with a note on it's 'genetic manipulation'?

Q.4 Define plant breeding. Add a note on interbreeding depressions.

Q.5 Comment on the macro and micro mutants.

Q.6 Write at length the role of mutation in crop improvement programs.

Q.7 Write a detail account of 'Distant hybridization with Defining problems and Remedial measures'.

Q.8 Give a brief account of seed production and distribution of 'Cotton'.

OR

R-6225

Total No. of Printed Pages:1

SUBJECT CODE NO:- R-6225
FACULTY OF SCIENCE AND TECHNOLOGY
M.Sc. (Sem-III) Examination April/May 2019
Botany
Elective – B: (B) Plant Pathology-II -BOT-522

[Time: Three Hours] **[Max. Marks:80]**

Please check whether you have got the right question paper.

N.B (i) Section 'A' is compulsory.
(ii) Attempt any five questions from section 'B'.
(iii) Illustrate your answer wherever necessary.

Section – A

Q.1 Write short notes on 20

a) Sesamumphylody
b) Deficiency
c) Wilt
d) Mycoplasma
e) Yellow Vien mosaic
f) Citrus canker
g) Rot
h) Toxins
i) Non-parasite
j) Grassy shoot

Section – B 60

Q.2 Describe the biotic agents involved in infections of plant diseases.

Q.3 What are abiotic agents? Add a note on its effect on the environment.

Q.4 Give a detailed account of phytoplasmic diseases with examples.

Q.5 Describe Symptomology, etiology and disease management by plant viruses.

Q.6 Comment on bacterial diseases involved in cash plants.

Q.7 What are non-parasitic diseases. Add a note on its nutritional deficiency.

Q.8 Give an account on mango black tip.

OR

Total No. of Printed Pages:1

SUBJECT CODE NO:- R-6225
FACULTY OF SCIENCE AND TECHNOLOGY
M.Sc. (Sem-III) Examination April/May 2019
Botany
Elective – B: (C) Taxonomy of Angiosperms-II -BOT-522

[Time: Three Hours] **[Max. Marks:80]**

Please check whether you have got the right question paper.

N.B i) Question 01 is compulsory from Section A.
ii) Attempt any 05 questions from Section B.

Section A

Q.1 Write short notes on 20
a) Sympatric
b) Adaptive radiation
c) Autonym
d) Micro-morphology
e) Cytology
f) Hybrid
g) Molecular evolution
h) Rejected name
i) Abrupt speciation
j) Herbarium

Section B

Q.2 Discuss the causes of variation in population, with special reference to its ecotypes. 12

Q.3 Give a detail account on the procedure to describe new taxon. 12

Q.4 Comment on 'Taxonomic evidences'. 12

Q.5 Write in detail the objectives and function of herbarium. 12

Q.6 Explain in detail 'numerical taxonomy'. 12

Q.7 Discuss order 'Cucurbitales'. 12

OR

Total No. of Printed Pages:1

SUBJECT CODE NO:- R-6225
FACULTY OF SCIENCE AND TECHNOLOGY
M.Sc (Sem-III) Examination April/May 2019
Botany
Elective – B: (D) Advanced Plant Physiology & Biochemistry-II -BOT-522

[Time: Three Hours] **[Max. Marks:80]**

Please check whether you have got the right question paper.

N.B (i) Section 'A' in compulsory.
(ii) Attempt any five questions from section 'B'.
(iii) Illustrate your answer wherever necessary.

Section A

Q.1 Write short notes on : 20

a) Transformation
b) C_3
c) Metabolic Pathway
d) Tissues
e) Biomass
f) Green manuring
g) GGF System
h) Single cell protein
i) Crop fractionation
j) Solid waste

Section B 60

Q.2 What do you know about classical selective breeding?

Q.3 Define "Photosynthesis". Add a note on C_3 Pathway.

Q.4 Comment on "Biomass Productivity".

Q.5 Write at length on "Biological weed control".

Q.6 Describe in detail the practices of green manuring.

Q.7 Give an account on intensive cropping.

Q.8 Enumerate at length the signal Transduction in plants.

OR

Total No. of Printed Pages:1

SUBJECT CODE NO:- R-6225
FACULTY OF SCIENCE AND TECHNOLOGY
M.Sc. (Sem-III) Examination April/May 2019
Botany
Elective – B: (E) Applied Mycology-II -BOT-522

[Time: Three Hours] **[Max. Marks:80]**

N.B Please check whether you have got the right question paper.
i) Question 1 is compulsory from Section A.
ii) Attempt any five questions from Section B.

Section – A

Q.1 Write short notes on : 20
a) Techniques in fermentation
b) Fermenters
c) Limitation of Industries
d) Screening
e) TLC
f) Importance Instruments used in Fermentation
g) End Product
h) Recovery
i) Effluents
j) Types of Sterilization

Section – B

Q.1 Define chromatography. Give a detail account on HPLC. 12

Q.2 Describe the techniques and application of Ion-Exchange chromatography in Industries. 12

Q.3 What do you mean Biological principles are they beneficial in R&D Laboratories. 12

Q.4 Comment on Diffusion Assay. 12

Q.5 Write a note on the Techniques employed in partition chromatography. 12

Q.6 Write in detail cheese fermentation. 12

Q.7 What are the techniques used in the detection of fermentation products. 12

OR

Total No. of Printed Pages:1

SUBJECT CODE NO:- R-6225
FACULTY OF SCIENCE AND TECHNOLOGY
M.Sc. (Sem-III) Examination April/May 2019
Botany
Elective – B: (F) Biodiversity-II - BOT-522

[Time: Three Hours] **[Max. Marks:80]**

Please check whether you have got the right question paper.

N.B (i) Section 'A' is compulsory.
(ii) Attempt any five questions from section 'B'.
(iii) Illustrate your answer wherever necessary.

Section – A

Q.1 Write notes on : 20

a) OTU'S
b) Banding pattern
c) Petiole anatomy
d) Anomocytic
e) Pollen morphology
f) Hot spot
g) Principle of Adansonian classification
h) Application of DNA finger printing
i) Paleo endemism
j) Similarity matrix

Section – B

Q.2 Give an account of Megadiversity regions of the world. 12

Q.3 What is phytogeography? Add a note on floristic regions of India. 12

Q.4 Describe the role of chemotaxonomy in plant systematics. Add a note on its importance. 12

Q.5 Explain in detail importance of embryological characters in plant taxonomy. 12

Q.6 Define cladogram? Write in detail merits and demerits of numerical taxonomy. 12

Q.7 Explain DNA finger printing method. Add a note on its application. 12

Total No. of Printed Pages:1

SUBJECT CODE NO:- R-6209
FACULTY OF SCIENCE AND TECHNOLOGY
M.Sc. (Sem-I) Examination April/May 2019
Botany
Taxonomy of Angiosperms -BOT-404

[Time: Three Hours] **[Max. Marks:80]**

Please check whether you have got the right question paper.

N.B i) Section A is compulsory.
ii) Attempt any five questions from Section B.
iii) Illustrate your answer wherever necessary.

Section A

Q.1 Write short notes on 20

a) Objectives of taxonomy
b) Pentoxylales
c) Possible ancestors of Angiosperms
d) Phylogenetic System
e) APG
f) Monographs
g) Lectotype
h) GIS
i) Numerical taxonomy
j) Species concept

Section B

Q.2 What is taxonomy? Write a note on scope of taxonomy. 12

Q.3 Describe in details Cronquist's system of classification. 12

Q.4 Write an essay on Binomial nomenclature. 12

Q.5 Describe the role of embryology and palynology in taxonomy. 12

Q.6 Explain in details speciation and its types. 12

Q.7 Comment on the family characters of Malvaceae with suitable examples. 12

Total No. of Printed Pages:1

SUBJECT CODE NO:- R-6116

FACULTY OF SCIENCE AND TECHNOLOGY

M.Sc. (Sem-I) Examination April/May 2019

Botany

Cell Biology - BOT - 401

[Time: Three Hours] **[Max.Marks:80]**

Please check whether you have got the right question paper.

N.B
1. Section A is compulsory .
2. Attempt any five questions from section B
3. Illustrate your answer where necessary.

Section – A

Q.1 Write short notes on 20

a) Prokaryotes
b) Plasma membrane
c) Plasmodesmata
d) Cytoskeleton
e) Plant vacuoles
f) Biogenesis
g) Envelope
h) Ultra structure
i) Ribosomes
j) Growth

Section – B 60

Q.2 Explain in detail the Ultrastructure of Eukaryotic cell.

Q.3 Give an account on the organization of cytoskeleton in plants.

Q.4 Define organelle. Add a note on its components.

Q.5 Comment on Ultrastructure & function of mitochondria.

Q.6 Describe in detail the structure and site of protein synthesis.

Q.7 Write an account on the structure and functions of Nucleus.

Q.8 Explain the organization of genome and patterns of gene expression.