Total No. of Printed Pages:1

SUBJECT CODE NO:- F-6003
FACULTY OF SCIENCE AND TECHNOLOGY
M.Sc. (CBCGS) (Sem -I) Examination Oct/Nov 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) Cell expansion
c) Macro molecules
d) Micro filaments
e) Storage organells
f) Gene
g) Nucleous
h) Mito chondria
i) RNA
j) Envelope

Section B

Q.2 Explain in detail ultra-structure of cell. **12**

Q.3 Define cyto skeleton. Add a note on its flagella and other movements. **12**

Q.4 Define plasmodesmata with special reference to its structure and role in the movement of molecules in cell. **12**

Q.5 Comment on the organization of genome with "gene expression". **12**

Q.6 Describe the ultra structure of nucleus. **12**

Q.7 Write an account on initiation, elongation and termination of Ribosomes. **12**

Q.8 Define "Karyotypes". Add a note on its ultrastructure. **12**

F-6018

Total No. of Printed Pages:1

SUBJECT CODE NO:- F-6018
FACULTY OF SCIENCE AND TECHNOLOGY
M.Sc (CBCGS) (Sem -III) Examination Oct/Nov 2019
Botany
Biology & Diversity of Bryophytes, Pteridophytes & Gymnosperms
BOT- 501

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

Please check whether you have got the right question paper.

N.B i) Q.No.1 from section A is compulsory.
ii) Attempt any 05 questions from section B.
iii) Illustrate your answer wherever necessary.

Section A

Q.1 Write short notes on 20
(a) Phylogeny
(b) Origin
(c) Telome
(d) Gamatophytes
(e) Amphigastria
(f) Ovulferous scale
(g) Male gamatophyte of pinus
(h) Anatomy of selaginella stem
(i) Gemma cup
(j) Impression

Section B

Q.2 Describe the system of classification of order "Takakiales". 12

Q.3 Write at length the origin and evolution of "Psilophytales". 12

Q.4 Explain the stelar organisation and evolution in "Pteridophyta". 12

Q.5 Comment on "Ginkgoaceae". 12

Q.6 Give a brief description on the contribution of "Birbal Sahanis" work on Fossils. 12

Q.7 Define "sporophyte". Add a note on 'seed habit'. 12

Total No. of Printed Pages:1

SUBJECT CODE NO:- F-6033
FACULTY OF SCIENCE AND TECHNOLOGY
MSc (CBCGS) (Sem -I) Examination Oct/Nov 2019
Botany
Molecular Biology - BOT-402

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

Please check whether you have got the right question paper.

i) Part A is compulsory.
ii) Attempt any five questions from Part B
iii) Draw neat diagram wherever necessary.

PART A

Q.1) Write short notes on 20

1) CAMP
2) Second Messengers
3) Microbodies
4) Retinoblastoma
5) COT value curve
6) FISH
7) Golgi apparatus
8) Ultra Centrifugation
9) Nuclear DNA
10) Immuno technique

PART B

Q.2) Give an account of post translation modification in RER. 12

Q.3) Define call signaling. Add a note on G-protein mediated cell signaling pathway 12

Q.4) Comment on mechanisms of programmed cell death 12

Q.5) Describe structure and functions of ER in plant cell. 12

Q.6) Explain in detail the appreciation and working process of Gel- Electrophoresis 12

Q.7) Explain protein sorting 12

Q.8) Write at length the karyotype analysis. 12

Total No. of Printed Pages:1

SUBJECT CODE NO:- F-6049
FACULTY OF SCIENCE AND TECHNOLOGY
MSc (CBCGS) (Sem -III) Examination Oct/Nov 2019
Botany
Ecology & Conservation - BOT 502

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

Please check whether you have got the right question paper.

N.B i) Part 'A' is Compulsory.
ii) Attempt any five question from part 'B',
iii) Draw neat labled diagrams wherever necessary,
iv) Assume suitable data if necessary.

Part 'A'

Q.1 Write Short notes on : 20
a) Phenology
b) Mutalism
c) Mono Climax
d) Ecological Pyramids
e) Seed bank
f) Plants as bioindicators
g) Geophytes
h) CFC
i) BSI- Western circle
j) Scramble Competition

Part 'B'

Q.2 What is Predation? Describe in detail various from of Predations. 12

Q.3 Explain the concept of biome. Add a note on Tundra biomes of world. 12

Q.4 Explain the concept of sustainable development Add a note on ecological Management practices used in it. 12

Q.5 Describe the concepts of Add a note on its types and importance. 12

Q.6 Describe in detail how the process of photosynthesis and decomposition involved in carbon cycle. 12

Q.7 What is Acid rain? Add a note on its effect on plants. 12

Q.8 Describe role of botanical Gardens in plant conservation. Add a note on any two botanical gardens in India. 12

Total No. of Printed Pages:01

SUBJECT CODE NO:- F-6064
FACULTY OF SCIENCE AND TECHNOLOGY
M.Sc (CBCGS) (Sem -I) Examination Oct/Nov 2019
Botany
Biology & Diversity of Virus Phytoplasma Bacteria Algae, & Fungi
BOT-403

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

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

Section A 20

Q.1 Write short notes on.
a) Biofertilizer- powdery mildew.
b) Pleaurotus
c) Canker
d) Phytoplasma
e) Yeast
f) Eye spot
g) Chantransia
i) Unicellular algae
j) Diatoms

Section B 60

Q.2 Write in detail Fritch system of Classification.

Q.3 Give a general Characteristics of Chlorophyta with haplontic life cycle pattern.

Q.4 Describe in detail the diversified habitat of algae.

Q.5 Write at length the classification of zggomycotina.

Q.6 Comment on Koch's postulates. Add a note on its application.

Q.7 Describe the general account of viruses.

Q.8 Comment on economic importance of Fungi.

Total No. of Printed Pages:1

SUBJECT CODE NO:- F-6081
FACULTY OF SCIENCE AND TECHNOLOGY
MSc (CBCGS) (Sem -III) Examination Oct/Nov 2019
Botany
Elective (A) Crop Genetics & Plant Breeding-I - BOT-521

[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. Conservation
2. Global network
3. Pure line selection
4. Cross –pollinated crops.
5. Incompatibility
6. Sex – expression
7. Sterility
8. Back-cross
9. Gene –transfer
10. Acclimatization

Section 'B'

Q.2 Define genetic conservation. Add a note on it'snetworking . 12

Q.3 Write at length the methods of plant breeding. 12

Q.4 Explain the crop breeding with it's nutritional objectives. 12

Q.5 Give an account on incompatibility in plant breeding. 12

Q.6 What are the methods used in the classification of male sterility. 12

Q.7 Describe the methodology used in selection to character under gene transfer. 12

Total No. of Printed Pages:1

SUBJECT CODE NO:- F-6081
FACULTY OF SCIENCE AND TECHNOLOGY
MSc (CBCGS) (Sem -III) Examination Oct/Nov 2019
Botany
Elective (B) Plant Pathology-I - BOT-521

[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. ELISA
2. PCR
3. Koch's postulate
4. Biotic factors
5. Pathogens
6. Etiology
7. Zoosporic
8. Stem galls
9. Ergot
10. Smut

Section 'B'

Q.2 Briefly comment on plant diseases diagnosis. 12

Q.3 Give an account on the classification of plant diseases. 12

Q.4 Write at length the role of biotic factors in plant diseases management. 12

Q.5 Write at length the smut disease of jowar crop. 12

Q.6 Explain the role of ascorycetons fungi in causing plant diseases. 12

Q.7 Comment on rust disease cycle. 12

Total No. of Printed Pages:1

SUBJECT CODE NO:- F-6081
FACULTY OF SCIENCE AND TECHNOLOGY
MSc (CBCGS) (Sem -III) Examination Oct/Nov 2019
Botany
Elective (C) Taxonomy of Angiosperms-I - BOT-521

[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. Functions of taxonomy
2. Polyphyletic
3. Synthetic
4. Good characters
5. Cradle of angiosperms
6. Major categories
7. Cladogram
8. Analogy
9. Apomorphic characters
10. OTU

Section 'B'

Q.2 Explain in details the aims and objectives of taxonomy. 12

Q.3 Give details account on "Hypothesis of herbacions origin". 12

Q.4 Discuss the minor, major and intersperific categories. 12

Q.5 Write in detail "post Darwinian system of classification" 12

Q.6 Comment on analytical and synthetic characters. 12

Q.7 Write at length an "cladistics in taxonomy". 12

Q.8 Explain primitive and advanced characters in phylogenetic relationship. 12

Total No. of Printed Pages:1

SUBJECT CODE NO:- F-6081
FACULTY OF SCIENCE AND TECHNOLOGY
MSc (CBCGS) (Sem -III) Examination Oct/Nov 2019
Botany
Elective (D) Advanced Plant Physiology & Biochemistry-I - BOT-521

[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. Organic acids
2. Vitamins
3. LAI
4. Phycobiliproteins
5. Sterols
6. ESR
7. Gd filtration
8. Anthocyanin
9. Radio isotopes
10. Chromatography

Section 'B'

Q.2 Write at a length the structure and bio-chemical role of vitamins and nucleic acids. 12

Q.3 Explain in details the structure, classification and isolation of alkaloids compound. 12

Q.4 Describe in detail principle and application of different kinds of chromatography. 12

Q.5 What is the role and application of autoradiography in tracer technique? 12

Q.6 Explain in detail growth rates and its kinds. 12

Q.7 Illustrate the working principle and application of fluorescence uv. 12

Q.8 Comments on morphological and physiological factors in relation to dwarfism. 12

Total No. of Printed Pages:1

SUBJECT CODE NO:- F-6081
FACULTY OF SCIENCE AND TECHNOLOGY
MSc (CBCGS) (Sem -III) Examination Oct/Nov 2019
Botany
Elective A (E) Applied Mycology-I -BOT-521

[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. Fermentation
2. Structure of penicillin
3. Mushrooms
4. Screening
5. Acid producers
6. Yeast
7. Enzymes
8. Antibiotics
9. Incubation
10. Nutritive value

Section 'B'

Q.2 Give a detail account on penicillin fermentation. 12

Q.3 Briefly write a note on fungi as food and feed. 12

Q.4 Write at length the cultivation of mushrooms. 12

Q.5 Define screening? Add a note on its applications. 12

Q.6 Explain the concept of fermentation used in industrial fermentation products. 12

Q.7 Comment on acid producers. Add a note on its application in daily uses. 12

Total No. of Printed Pages:1

SUBJECT CODE NO:- F-6081
FACULTY OF SCIENCE AND TECHNOLOGY
MSc (CBCGS) (Sem -III) Examination Oct/Nov 2019
Botany
Elective (F) Biodiversity-I - BOT-521

[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. Gamma diversity
2. Assimilation
3. Germplasm
4. Species diversity
5. Pyramid of energy
6. Temperate region
7. Domestication concept
8. Detritus food chain
9. Deciduous forest
10. Indian sub –continent as origin of crop diversity.

Section 'B'

Q.2 What is biodiversity? Explain its types.

Q.3 Write in details about vavilov's center of origin of cultivated plants. 12

Q.4 Describe various taxonomic procedures. 12

Q.5 What is tropical ecosystem? Add a note on its functions and energetics. 12

Q.6 What is agricultural diversity? Add a note on its causes and consequences on biodiversity. 12

Q.7 Write an essay on origin and distribution of crop domestication in India. 12

Total No. of Printed Pages:1

SUBJECT CODE NO:- F-6081
FACULTY OF SCIENCE AND TECHNOLOGY
MSc (CBCGS) (Sem -III) Examination Oct/Nov 2019
Botany
Elective (G) Seed Technology-I - BOT-521

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

Please check whether you have got the right question paper.

N.B
i. Attempt 'A' is compulsory.
ii. Attempt any five questions from section 'B'

Section 'A'

Q.1 Write short notes on 20

1. Types of endosperms.
2. Apomixes
3. Haplontic seed sterility
4. Effects of age on seed vigour
5. Genetic purity
6. Rouging
7. Self pollinated seed crop harvesting
8. Seed source
9. Exogenous factor
10. Synthetic seeds

Section 'B'

Q.2 Comments on seed quality with reference to core of seeds

Q.3 Give an account on seed coat structure. Mechanical strength and its permeability 12

Q.4 Define polyembryony with its important significance in seed industry 12

Q.5 Discuss the role of promoters and inhibitors in seed germination. 12

Q.6 Comments on types of seed dormancy mechanism and various factors affect's on it. 12

Q.7 What is the precautionary measure should be taken for maintenance of genetic purity of seeds? 12

Q.8 Give a brief account on classification of crop with reference to mode of reproduction. 12

Total No. of Printed Pages:1

SUBJECT CODE NO:- F-6096
FACULTY OF SCIENCE AND TECHNOLOGY
M.Sc (CBCGS) (Sem. -I) Examination Oct/Nov 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
1) Section A is compulsory.
2) Attempt any five questions from Section B.
3) Illustrate your answer wherever necessary.

Section A

Q.1 Write short notes on: 20
a) Scopes of taxonomy
b) Cycadales
c) Natural system
d) Melbourne code
e) Isotype
f) Computer application in Taxonomy
g) Peridicals
h) Anatomy in taxonomy
i) Speciation
j) Encyclopedias

Section B

Q.2 Write an account on principles and objectives of taxonomy. 12

Q.3 Explain in detail Takhtajan's system. 12

Q.4 Comment on method typification. 12

Q.5 Write in details numerical taxonomy add a note on cladogram and dendrogram. 12

Q.6 Comment on taxonomic hierarchy. 12

Q.7 Describe family magnoliaceae and add a note on its primitive characters. 12

Q.8 Write at length anatomy as a taxonomic evidence with suitable examples. 12

Total No. of Printed Pages:1

SUBJECT CODE NO:- F-6112
FACULTY OF SCIENCE AND TECHNOLOGY
M.Sc (CBCGS) (Sem. -III) Examination Oct/Nov 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

1. Resistance
2. Gene – transfer
3. Mutation
4. Variety Evaluation
5. Interbreeding
6. Heterosis
7. Spectrum diseases
8. Hybridization
9. Radiation
10. Manipulation.

Section 'B'

Q.2 Write an account on "Distant hybridization" with a note on its remedial measures. 12

Q.3 Define heterosis breeding with special reference to genetic manipulation. 12

Q.4 Given an account on disease resistance mechanisms with suitable example. 12

Q.5 Write at length mutational breeding. 12

Q.6 Give a brief account of seed production and distribution. 12

Q.7 Explain the development of Breeding crops with special reference to Marathwada region. 12

OR

Total No. of Printed Pages:1

SUBJECT CODE NO:- F-6112
FACULTY OF SCIENCE AND TECHNOLOGY
M.Sc (CBCGS) (Sem. -III) Examination Oct/Nov 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 question from Section B.
(iii) Illustrate your answer wherever necessary.

Section 'A'

Q.1 Write Short Notes on:- 20

a) Bacteria
b) Nematodes
c) Air Pollution
d) Grassy shoot
e) Papaya Mosaic
f) Citrus Canker
g) Soft Rot
h) Gummosis
i) Nutritional deficiencies
j) Mango black

Section 'B'

Q.2 Define Biotic Agents. Write in detail the role of Fungi in Crop plants causing disease. 12

Q.3 Comment on Symptoms and disease cycle of "Phytoplasma". 12

Q.4 Give a detailed account of various diseases caused by Viruses. 12

Q.5 Write at length symptoms and role of Bacterial diseases of Plants 12

Q.6 Comment on Blossom rot of Tomato and add a note on Mango black tip 12

Q.7 Write at length various Nutritional deficiencies of crop plants. 12

OR

F-6112

Total No. of Printed Pages:1

SUBJECT CODE NO:- F-6112
FACULTY OF SCIENCE AND TECHNOLOGY
M.Sc (CBCGS) (Sem. -III) Examination Oct/Nov 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) 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

1) Anatems
2) Ecotypes
3) Legitimate names
4) Autonym
5) Rejected names
6) Latin diagnosis
7) TEM
8) Herbarium
9) Naked name
10) Research

Section 'B'

Q.2 Explain in detail about the Types of Speciation's. 12

Q.3 Write in detail types of "Botanical Nomenclature" with specific example. 12

Q.4 Give a detail account on principle and working of scanning Electron microscope. 12

Q.5 Comment on micro morphology. 12

Q.6 Explain Role of herbarium in "systematic" 12

Q.7 Write at length on "Numerical Taxonomy". 12

Q.8 Discuss order Fabales. 12

OR

Total No. of Printed Pages:1

SUBJECT CODE NO:- F-6112
FACULTY OF SCIENCE AND TECHNOLOGY
M.Sc (CBCGS) (Sem. -III) Examination Oct/Nov 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' is Compulsory.
(ii) Attempt any five question from Section B.
(iii) Illustrate your answer wherever necessary.

Section 'A'

Q.1 Write Short Notes on 20

a) Herbicides
b) Biomass
c) GGF
d) Leaf Protein
e) Silage
f) LPC
g) Bidkin process
h) Hydrocarbon
i) Weeds
j) Tilage

Section 'B'

Q.2 Discuss "CAM" Pathway in relation to crop productivity. 12

Q.3 Give a detailed account of Biogas plant and its Application. 12

Q.4 Briefly comment on practices of Green Manuring. 12

Q.5 Write at length crop fractionation. 12

Q.6 Comment on the applications of PCR. 12

Q.7 Explain the SCP and add a note on protein productivity. 12

OR

F-6112

Total No. of Printed Pages:1

SUBJECT CODE NO:- F-6112
FACULTY OF SCIENCE AND TECHNOLOGY
M.Sc (CBCGS) (Sem. -III) Examination Oct/Nov 2019
Botany
Elective – (B) E-Applied Mycology-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 question from Section B.
(iii) Illustrate your answer wherever necessary.

Section A

Q.1 Write Short notes on:- 20

1. End – Point
2. Cheese
3. Centrifugation
4. Ion – Exchange
5. Assay
6. Spectrophotometry
7. Fermentation
8. Test – organism
9. Industrial Waste
10. Growth Rate

Section B

Q.2 Discuss the principles and uses of HPLC. 12

Q.3 Give a detail account on Spectrophotometry. 12

Q.4 Briefly comment on growth Assay. 12

Q.5 Write at length fungi in Cheese Production. 12

Q.6 Comment on the Biological Principles used in industries. 12

Q.7 Explain in detail Cheese Production. 12

OR

Total No. of Printed Pages:1

SUBJECT CODE NO:- F-6112
FACULTY OF SCIENCE AND TECHNOLOGY
M.Sc (CBCGS) (Sem. -III) Examination Oct/Nov 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 question from Section B.
(iii) Illustrate your answer wherever necessary.

SECTION - A

Q.1 Write Short notes on: 20

a) Adansonian classification.
b) Importance of trichomes in plant taxonomy.
c) Phytogeography.
d) Hot spot – Western Ghats
e) Realm
f) Ideogram
g) Serotaxonomy
h) Cluster analysis
i) DNA – Polymorphism
j) Neoendemism

SECTION – B

Q.2 Explain in detail role of palynology in relation to plant taxonomy. 12

Q.3 Define Chemotaxonomy? Explain its importance in taxonomy. 12

Q.4 Describe various phytogeographic regions of India. 12

Q.5 What is numerical taxonomy? Add a note on importance of numerical taxonomy in plant sciences. 12

Q.6 Discuss the role of DNA in plant identification. Comment on its merits and demerits. 12

Q.7 Give an account of hotspot regions of India. 12

Q.8 What is endemism? Explain its concept and types. 12

OR

Total No. of Printed Pages:1

SUBJECT CODE NO:- F-6112
FACULTY OF SCIENCE AND TECHNOLOGY
M.Sc (CBCGS) (Sem. -III) Examination Oct/Nov 2019
Botany
Elective – (B) G-Seed Technology – II

[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 wherever necessary.

Section – A

Q.1 Write short notes on – 20

a) QC for export seeds.
b) ODV test.
c) Varietal Verification.
d) Purpose of Seed Certification.
e) Seed lot number
f) SSCA
g) SSTL
h) Mechanism of Seed quality control.
i) Field Inspection report
j) Inspection procedure

Section – B

Q.2 Describe in detail the seed quality standard in India. 12

Q.3 Give an account of Seed Sampling Method. 12

Q.4 Comments on importance and significance of seed preservation and storage of seed sample. 12

Q.5 Write at length different units of Seed Certification agency. 12

Q.6 What is the structure and role of statutory bodies and agencies established in India. 12

Q.7 Discuss significance of plant quarantine regulation and it's setup in India. 12

Q.8 Explain in brief the equipment used by Seed inspector. 12

Total No. of Printed Pages:1

SUBJECT CODE NO:- F-6204
FACULTY OF SCIENCE AND TECHNOLOGY
MSc (CBCGS) (Sem -IV) Examination Oct/Nov 2019
Botany
Elective - A(A) Advanced Genetics & Molecular Biology-I-523(B)

[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 5 questions from section B
3. Illustrate your answer wherever necessary

Section A

Q.1 Write notes on 20

a) Gene families
b) Syndsomes
c) Transduction
d) Tetrad analysis
e) Chloroplast genomes
f) Repair process
g) Modification of DNA
h) Split gene
i) chain – initiation
j) CAP proteins

Section – B

Q.2 Write at length the microbial genetics 12

Q.3 Comment on oncogenes 12

Q.4 Explain enzymes of replications 12

Q.5 Define Protein? write a note on RNA synthesis 12

Q.6 Give a detail account on protein synthesis 12

Q.7 Describe prokaryotic gene expression 12

Total No. of Printed Pages:1

SUBJECT CODE NO:- F-6204
FACULTY OF SCIENCE AND TECHNOLOGY
MSc (CBCGS) (Sem -IV) Examination Oct/Nov 2019
Botany
Elective - Plant Pathology- III-523

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

Please check whether you have got the right question paper.

N.B
1. Attempt all questions
2. Section A is compulsory
3. Attempt all questions from Section 'B'

Section A

Q.1 Write short note on 20
a) Epidemiology
b) Epiphytotics
c) seed borne – fungi
d) Bacteria
e) fusarium toxin
f) macerating
g) Transaminase
h) Eradication
i) Fungicides
j) Bioagents

Section – B

Q.2 Write at length contribution of various scientists in plant pathology 12

Q.3 Explain in detail plant disease epidemiology and epiphytotics 12

Q.4 Comment on methods and producers in detection of seed borne – fungi 12

Q.5 Give a general account of enzyme transaminase and their role in disease development 12

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

Total No. of Printed Pages:1

SUBJECT CODE NO:- F-6204
FACULTY OF SCIENCE AND TECHNOLOGY
MSc (CBCGS) (Sem -IV) Examination Oct/Nov 2019
Botany
Elective - Taxonomy of Angiosperms-III - 523

[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 5 questions from section B
3. Illustrate your answer wherever necessary

Section A

Q.1 Write short note on 20
a) Pentoxylates
b) Durian
c) fossils
d) Taxonomy
e) GIS
f) keys
g) classification systems
h) phytogeography
i) vegetation
j) Hotspot

Section – B

60

Q.2 Explain in details the phylogeny of Isoetes

Q.3 Give an account on pteridospermales theory

Q.4 Define fossils angiosperms add a note palmoxyron

Q.5 Describe use of serological tools with computer study

Q.6 Comment on the angiospermic taxonomy add a note on it computer uses

Q.7 Comment on the world vegetation

Total No. of Printed Pages:1

SUBJECT CODE NO:- F-6204
FACULTY OF SCIENCE AND TECHNOLOGY
MSc (CBCGS) (Sem -IV) Examination Oct/Nov 2019
Botany
Elective - Advanced Plant Physiology & Biochemistry-III - 523

[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 5 questions from section B
3. Illustrate your answer wherever necessary

Section A

Q.1 Write note on 20

1) absorption
2) Green manure
3) Weed biomass
4) Mobilization
5) Herbicides
6) Anti- transpiration
7) stomata types
8) Distribution
9) Fertilizers
10) Water potential

Section – B

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

Q.3 Defines Abiotic stress? add a note on the effects on plant metabolism 12

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

Q.5 Comment on the frequency distribution 12

Q.6 Explain the significance of t- test in plot designing 12

Q.7 Write at length organic farming 12

Total No. of Printed Pages:1

SUBJECT CODE NO:- F-6204
FACULTY OF SCIENCE AND TECHNOLOGY
MSc (CBCGS) (Sem -IV) Examination Oct/Nov 2019
Botany
Elective - Applied Mycology-III - 523

[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 5 questions from section B
3. Illustrate your answer wherever necessary

Section A

Q.1 Write short note 20

1) single cell protein
2) primary stock culture
3) Dermal infection
4) Biomass
5) stock culture
6) Civilization
7) Efficient
8) Amylase
9) Ethanol
10) Incubation period

Section – B

Q.2 Write at length the role of fungi in Agriculture 12

Q.3 Define 'SCP'. Add a note on its product 12

Q.4 Give a detail account of fuel fermentation 12

Q.5 Explain the role of working stock culture in industries 12

Q.6 Comment on "Aspergillosis" 12

Q.7 Describe the role of fungi in skin diseases 12

Total No. of Printed Pages:1

SUBJECT CODE NO:- F-6204
FACULTY OF SCIENCE AND TECHNOLOGY
MSc (CBCGS) (Sem -IV) Examination Oct/Nov 2019
Botany
Elective - Biodiversity- III- 523

[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 5 questions from section B
3. Illustrate your answer wherever necessary

Section A

Q.1 Write short notes on 20

1) Geological Time scale
2) Importance of Taxonomy
3) Merits of natural system of classification
4) Few principles of Hutchinson's system of classification
5) good V/S bad characters
6) Qualitative characters
7) Economic importance of papaveraceae
8) Floral characters in Euphorbiaceae
9) plant inventory
10) Botanical garden

Section – B

60

Q.2 Give a comparative account of angiosperms with gymnosperms.

Q.3 Explain the concept of phylogenetic classification system. Add a note on Cronquests's classification system.

Q.4 What is character weighing? explain primitive and advanced characters

Q.5 Describe the family solanaceae upto floral formula and floral diagram write economic importance of few plants of it

Q.6 What is cryopreservation? write in detail about it

Q.7 Describe the family Rubiaceae upto floral formula and floral diagram write economic importance of few plants of it

Q.8 Define taxonomic key. explain different types of taxonomic keys

Total No. of Printed Pages:1

SUBJECT CODE NO:- F-6204
FACULTY OF SCIENCE AND TECHNOLOGY
MSc (CBCGS) (Sem -IV) Examination Oct/Nov 2019
Botany
Elective - A(A) Advanced Genetics & Molecular Biology-I-523(B)

[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 5 questions from section B
3. Illustrate your answer wherever necessary

Section A

Q.1 Write notes on 20

a) Gene families
b) Syndsomes
c) Transduction
d) Tetrad analysis
e) Chloroplast genomes
f) Repair process
g) Modification of DNA
h) Split gene
i) chain – initiation
j) CAP proteins

Section – B

Q.2 Write at length the microbial genetics 12

Q.3 Comment on oncogenes 12

Q.4 Explain enzymes of replications 12

Q.5 Define Protein? write a note on RNA synthesis 12

Q.6 Give a detail account on protein synthesis 12

Q.7 Describe prokaryotic gene expression 12

Total No. of Printed Pages:1

SUBJECT CODE NO:- F-6204
FACULTY OF SCIENCE AND TECHNOLOGY
MSc (CBCGS) (Sem -IV) Examination Oct/Nov 2019
Botany
Elective - Plant Pathology- III-523

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

Please check whether you have got the right question paper.

N.B
1. Attempt all questions
2. Section A is compulsory
3. Attempt all questions from Section 'B'

Section A

Q.1 Write short note on 20
a) Epidemiology
b) Epiphytotics
c) seed borne – fungi
d) Bacteria
e) fusarium toxin
f) macerating
g) Transaminase
h) Eradication
i) Fungicides
j) Bioagents

Section – B

Q.2 Write at length contribution of various scientists in plant pathology 12

Q.3 Explain in detail plant disease epidemiology and epiphytotics 12

Q.4 Comment on methods and producers in detection of seed borne – fungi 12

Q.5 Give a general account of enzyme transaminase and their role in disease development 12

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

Total No. of Printed Pages:1

SUBJECT CODE NO:- F-6204
FACULTY OF SCIENCE AND TECHNOLOGY
MSc (CBCGS) (Sem -IV) Examination Oct/Nov 2019
Botany
Elective - Taxonomy of Angiosperms-III - 523

[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 5 questions from section B
3. Illustrate your answer wherever necessary

Section A

Q.1 Write short note on 20
a) Pentoxylates
b) Durian
c) fossils
d) Taxonomy
e) GIS
f) keys
g) classification systems
h) phytogeography
i) vegetation
j) Hotspot

Section – B

60

Q.2 Explain in details the phylogeny of Isoetes

Q.3 Give an account on pteridospermales theory

Q.4 Define fossils angiosperms add a note palmoxyron

Q.5 Describe use of serological tools with computer study

Q.6 Comment on the angiospermic taxonomy add a note on it computer uses

Q.7 Comment on the world vegetation

Total No. of Printed Pages:1

SUBJECT CODE NO:- F-6204
FACULTY OF SCIENCE AND TECHNOLOGY
MSc (CBCGS) (Sem -IV) Examination Oct/Nov 2019
Botany
Elective - Advanced Plant Physiology & Biochemistry-III - 523

[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 5 questions from section B
3. Illustrate your answer wherever necessary

Section A

Q.1 Write note on 20

1) absorption
2) Green manure
3) Weed biomass
4) Mobilization
5) Herbicides
6) Anti- transpiration
7) stomata types
8) Distribution
9) Fertilizers
10) Water potential

Section – B

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

Q.3 Defines Abiotic stress? add a note on the effects on plant metabolism 12

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

Q.5 Comment on the frequency distribution 12

Q.6 Explain the significance of t- test in plot designing 12

Q.7 Write at length organic farming 12

Total No. of Printed Pages:1

SUBJECT CODE NO:- F-6204
FACULTY OF SCIENCE AND TECHNOLOGY
MSc (CBCGS) (Sem -IV) Examination Oct/Nov 2019
Botany
Elective - Applied Mycology-III - 523

[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 5 questions from section B
3. Illustrate your answer wherever necessary

Section A

Q.1 Write short note 20

1) single cell protein
2) primary stock culture
3) Dermal infection
4) Biomass
5) stock culture
6) Civilization
7) Efficient
8) Amylase
9) Ethanol
10) Incubation period

Section – B

Q.2 Write at length the role of fungi in Agriculture 12

Q.3 Define 'SCP'. Add a note on its product 12

Q.4 Give a detail account of fuel fermentation 12

Q.5 Explain the role of working stock culture in industries 12

Q.6 Comment on "Aspergillosis" 12

Q.7 Describe the role of fungi in skin diseases 12

Total No. of Printed Pages:1

SUBJECT CODE NO:- F-6204
FACULTY OF SCIENCE AND TECHNOLOGY
MSc (CBCGS) (Sem -IV) Examination Oct/Nov 2019
Botany
Elective - Biodiversity- III- 523

[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 5 questions from section B
3. Illustrate your answer wherever necessary

Section A

Q.1 Write short notes on 20

1) Geological Time scale
2) Importance of Taxonomy
3) Merits of natural system of classification
4) Few principles of Hutchinson's system of classification
5) good V/S bad characters
6) Qualitative characters
7) Economic importance of papaveraceae
8) Floral characters in Euphorbiaceae
9) plant inventory
10) Botanical garden

Section – B

60

Q.2 Give a comparative account of angiosperms with gymnosperms.

Q.3 Explain the concept of phylogenetic classification system. Add a note on Cronquests's classification system.

Q.4 What is character weighing? explain primitive and advanced characters

Q.5 Describe the family solanaceae upto floral formula and floral diagram write economic importance of few plants of it

Q.6 What is cryopreservation? write in detail about it

Q.7 Describe the family Rubiaceae upto floral formula and floral diagram write economic importance of few plants of it

Q.8 Define taxonomic key. explain different types of taxonomic keys

Total No. of Printed Pages:01

SUBJECT CODE NO:- F-6216
FACULTY OF SCIENCE AND TECHNOLOGY
M.Sc (CBCGS) (Sem -II) Examination Oct/Nov 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 whether necessary.

Section A

Q.1 Write short notes on:- 20

a) Water potential
b) Feedback inhibition
c) Photosynthetic organelle
d) Substrates level phosphorylation
e) Rubisco
f) EC number
g) Denaturation of protein
h) Abscisic acid
i) Phytochrome
j) Senescence

Section B

Q.2 Describe the various theories of water absorption and translocation in plants. 12

Q.3 Give the classification of enzymes according to IUB system. 12

Q.4 Write a detailed account of C_4 carbon concentrating mechanism. 12

Q.5 Explain the mechanism of glycolytic pathway operating in plants. 12

Q.6 Give the classification of proteins on the basis of chemical nature and solubility. 12

Q.7 Explain the $\beta -$ oxidation of fatty acids and give its energetics. 12

Q.8 What is growth curve? Add a note on plant growth regulating substances. 12

Total No. of Printed Pages:01

SUBJECT CODE NO:- U-9227
FACULTY OF SCIENCE AND TECHNOLOGY
M.Sc (Sem-III) (Service Course) (CBCGS) Examination Oct/Nov 2019
Botany & Herbal Tech.
Basic Plant Tissue Culture

[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 wherever necessary.

Section – A

Q.1 Write notes on: 20

a) Tissue
b) Sterilization
c) Composition
d) Organo genesis
e) Morphogenesis
f) Embryogenesis
g) Miropropagation
h) Suspension culture
i) Protoplast
j) Cybrid

Section – B

Q.2 Describe in detail the techniques of Plant tissue culture. 12

Q.3 Explain media composition. Add a note on preparation of media. 12

Q.4 Define cell. Add a note on cultural techniques. 12

Q.5 Give a detail account on isolation of single cell from cultures. 12

Q.6 Write in detail DNA recombinant techniques. 12

Q.7 What are synthetic seeds. Add a note on its reactors. 12

Q.8 Define gene. Add a note on gene transfer. 12