

Total No. of Printed Pages:1

SUBJECT CODE NO:- R-6081
FACULTY OF SCIENCE & TECHNOLOGY
M.Sc. (Sem-III) Examination Oct/Nov 2018

Botany

Elective A: (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 question from section 'B'
- iii) Illustrate your answer whenever necessary.

SECTION –A

Q.1 Write short notes on.

20

- a) Nutrition
- b) Genetic resources.
- c) Self pollination
- d) Asexual Propagation
- e) Breeding significance.
- f) Intergeneric
- g) Variety acclimatization
- h) Self breeding
- i) Perspectives
- j) Induction.

SECTION –B

Q.2 Write at length the genetic significance of self breeding and cross pollination.

12

Q.3 Comment on crop breeding.

12

Q.4 Define Crop genetics. Add a note on institutes engaged in conservation & improvement of crop genetics.

12

Q.5 Explain the sex expressions and chemical induction.

12

Q.6 Describe in detail the biochemicals overcoming in crop as a tool of breeding.

12

Q.7 Give an account on inter-specific and inter-generic transfer.

12

Q.8 Write in detail on intervarietal Back-cross.

12

OR

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SUBJECT CODE NO:- R-6081
FACULTY OF SCIENCE & TECHNOLOGY
M.Sc. (Sem-III) Examination Oct/Nov 2018
Botany
Elective A: (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 answer whenever necessary.

SECTION – A

Q.1 Write short notes on.

20

- a) Pathogens.
- b) Isolation
- c) Etiology
- d) Early blight
- e) White rust
- f) Mildews
- g) Rust
- h) Ergot
- i) Gall disease
- j) Wilt

SECTION – B

Q.2 Describe briefly the identification and purification process of plant pathogens.

12

Q.3 Give the detail account on the classification of crop plant diseases.

12

Q.4 Define plant diseases. Add a note on white rust of crucifers.

12

Q.5 Comment on Mastigomycotina with reference to crop plants.

12

Q.6 Write at length the symptoms, Etiology and disease cycle of 'head smut of Jowar'.

12

Q.7 Explain the diseases caused by Fungi in wheat crop.

12

Q.8 Write a note on 'Leaf spot diseases' caused by Alternaria Species.

12

OR

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SUBJECT CODE NO:- R-6081
FACULTY OF SCIENCE & TECHNOLOGY
M.Sc. (Sem-III) Examination Oct/Nov 2018

Botany

Elective A: (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 answer whenever necessary.

SECTION – A

Q.1 Write a short notes on:-

20

- 1) Objectives of Taxonomy.
- 2) Cradle of Angiosperms
- 3) Ranks
- 4) Bad characters
- 5) Minor categories
- 6) Convergent evolutions
- 7) Monophyletic
- 8) Cladograms
- 9) Genetic characters
- 10) Apomorphic characters

SECTION – B

Q.1 Give a detail account on Taxonomical studies as “Synthetic discipline.”

12

Q.2 Explain “origin of monocotyledons.”

12

Q.3 Comment on Taxonomic characters.

12

Q.4 Discuss in detail about Genetically and environmentally controlled characters.

12

Q.5 Write at length on “Operational Taxonomic Units.”

12

Q.6 Explain in detail “Minor and Major categories.”

12

Q.7 Give a detail account on “Plesiomorphic and apomorphic characters.”

12

OR

Total No. of Printed Pages:1

SUBJECT CODE NO:- R-6081
FACULTY OF SCIENCE & TECHNOLOGY
M.Sc. (Sem-III) Examination Oct/Nov 2018

Botany

Elective A: (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 answer whenever necessary.

SECTION – A

Q.1 Write a short notes on

- a. Carbohydrates
- b. Glycoproteins
- c. Phenolics
- d. Sterols
- e. Colorimeter
- f. X-ray diffraction
- g. NMR
- h. Thin layer chromatography
- i. Atomic absorption spectroscopy
- j. Causes of dwarfism

20

SECTION –B

Q.2 Write at length the structure and Biochemical role of plant constituents.

12

Q.3 Give a detail account on alkaloids. Add a note on its chemical constituents.

12

Q.4 Explain in detail on Plant constituents.

12

Q.5 Describe the role of plant pigments.

12

Q.6 Define senescence. Add a note on phases of growth in plant.

12

Q.7 Explain application of radioactive tracer techniques.

12

Q.8 Write in detail principle and application of spectrophotometry.

12

OR

Total No. of Printed Pages:1

SUBJECT CODE NO:- R-6081
FACULTY OF SCIENCE & TECHNOLOGY
M.Sc. (Sem-III) Examination Oct/Nov 2018
Botany
Elective A: (E) Applied Mycology-I -BOT-521

[Time: Three Hours]

[Max.Marks:80]

N.B

Please check whether you have got the right question paper.

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

SECTION – A

Q.1 Write short notes on.

20

- a) Fermenter
- b) Concept
- c) Yeast
- d) Mushroom
- e) Screening
- f) Isolates
- g) Nutritive value
- h) Wine
- i) Acid producer
- j) Amylase

SECTION –B

Q.2 Explain in detail the flowsheet diagrams of penicillin.

12

Q.3 Give an account on the types of fermentation.

12

Q.4 Define fermentation. Add a note on wine fermentation.

12

Q.5 Describe yeast in food

12

Q.6 Explain the cultivation of "Button Mushroom." Add a note on spawn development.

12

Q.7 Define screening. Add a note on primary screening.

12

Q.8 Discuss the characters and effective screening for Enzyme producer.

12

OR

Total No. of Printed Pages:1

SUBJECT CODE NO:- R-6081
FACULTY OF SCIENCE & TECHNOLOGY
M.Sc. (Sem-III) Examination Oct/Nov 2018
Botany
Elective A: (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 answer whenever necessary.

SECTION – A

Q.1 Write short notes on:

20

- a) Ecosystem.
- b) Flora
- c) Organization
- d) Nuclear centre
- e) Taxa
- f) Origin
- g) Domestication
- h) Secondary groups
- i) Germ-plasm
- j) Global status

SECTION – B

Q.2 Write in detail origin & Evolution of Diversity.

12

Q.3 Comment on Flora & Fauna

12

Q.4 Describe the Germ-plasm Theory.

12

Q.5 Give a detail account on plant global status in India.

12

Q.6 Define ecosystem. Add a note on types of Forest Ecosystem.

12

Q.7 Explain in detail the Indian status for primary & secondary Agricultural groups.

12

Total No. of Printed Pages:1

SUBJECT CODE NO:- R-6064
FACULTY OF SCIENCE & TECHNOLOGY
M.Sc. (Sem-I) Examination Oct/Nov 2018

Botany

Biology & Diversity of Virus Phytoplasma Bacteria, Algae & Fungi - BOT-403

[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. Biopesticides-Downy mildew
- b. Agaricus
- c. Smut
- d. Mosaic
- e. Saccheromyces
- f. Siphonous algae
- g. Reserve food material in Brown algae
- h. Raphae
- i. Role of algae in human welfare
- j. Algal blooms

Section B

60

Q.2 Write in detail Thallus account diversity in chlorophyta.

Q.3 Give an account on triphasic life cycle pattern with suitable examples.

Q.4 Describe phycology explaining the notable work by Indian phycologist.

Q.5 Write at length the classification of Basidiomycotina.

Q.6 Comment on the role of archaeobacteria.

Q.7 Describe Economical importance of virus in plants.

Q.8 Describe phytoplasma. Add a note on 'little leaf of Brinjal'.

Total No. of Printed Pages:01

SUBJECT CODE NO:- R-6033
FACULTY OF SCIENCE & TECHNOLOGY
M.Sc (Sem-I) Examination Oct/Nov 2018
Botany
Molecular Biology - BOT-402

[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 questions from part B.
 - iii. Draw next diagram wherever necessary.

Part- A

- | | | |
|-----|--|----|
| Q.1 | Write short notes on. | 20 |
| | <ol style="list-style-type: none"> a) G- proteins b) Signaling pathway c) Lysosomes d) Cytokinesis e) RER f) Cell death g) Golgi apparatus h) C – value paradox i) Electrophoresis j) GISH | |

Part - B

- | | | |
|-----|---|----|
| Q.2 | Define cell. Add a note on receptor tyrosin enzymes. | 12 |
| Q.3 | Give an account of glyoxisome and peroxisomes. | 12 |
| Q.4 | Comment on Golgi apparatus. | 12 |
| Q.5 | Define “restriction mapping “. Add a note on multigenes. | 12 |
| Q.6 | Discuss in details principles and working of ultracentrifugation. | 12 |
| Q.7 | Define signal transduction. Add a note on its receptor. | 12 |
| Q.8 | Write at length the karyotype analysis in Laboratories. | 12 |

Total No. of Printed Pages:01

SUBJECT CODE NO:- R-6049
FACULTY OF SCIENCE & TECHNOLOGY
M.Sc. (Sem-III) Examination Oct/Nov 2018
Botany
Ecology & Conservation - BOT 502

[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 5 questions from section B
- iii) Illustrate your answer where necessary

Section A

- Q.1 Write short note on: 20
- a) Grazing food chain
 - b) Synecology
 - c) Mutualism
 - d) Desert vegetation
 - e) Acid rain
 - f) Critically endangered species
 - g) Ramsar convention
 - h) Lotic-ecosystem
 - i) Sacred groove
 - j) "Forest Conservation ACT."

Section B

- Q.1 What is community? Explain analytical and synthetic characters of communities. 12
- Q.2 Explain Tundra Biome in detail. Add a note on its vegetation. 12
- Q.3 Explain the role of "Ozone" in global warming. 12
- Q.4 Comment on general activities of BSI in plant conservation. 12
- Q.5 What are "National Parks?" Discuss its role in conservation of "Biodiversity". 12
- Q.6 Explain the concept of sustainable development with special reference to "Plant Biodiversity". 12
- Q.7 Describe biogeochemical "Carbon-Cycle" in aquatic ecosystem. 12