

Reg. No. :

D 2119

Q.P. Code : [D 09 PBO 06]

(For the candidates admitted from 2009 onwards)

M.Sc. DEGREE EXAMINATION, MAY 2013.

Second Year

Botany

**ENVIRONMENTAL BOTANY AND CONSERVATION
BIOLOGY**

Time : Three hours

Maximum : 100 marks

Answer any FIVE questions.

All questions carry equal marks.

(5 × 20 = 100)

1. Describe the different components of an ecosystem. Explain any one example of ecosystem.
2. Discuss the structure of biotic community.
3. Write an account on oxygen and sulphur cycles.
4. Write an essay on air pollution. Add a note on its control measures.

5. Discuss in detail about radiation pollution and discuss the control measures.
 6. Write an essay on wild life management.
 7. Explain the laws for conservation of forest.
 8. Discuss the conservation of biodiversity.
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Reg. No. :

D 2120

Q.P. Code : [D 09 PBO 07]

(For the candidates admitted from 2009 onwards)

M.Sc. DEGREE EXAMINATION, MAY 2013.

Second Year

Part III — Botany

ANGIOSPERM SYSTEMATICS

Time : Three hours

Maximum : 100 marks

Answer any FIVE of the following.

All questions carry equal marks.

(5 × 20 = 100)

1. (a) Explain Bessy system of classification.
(b) Rules and regulations of ICBN.
2. Explain the important characters of the following families.
 - (a) Caryophyllaceae
 - (b) Portulacaceae
 - (c) Tiliaceae
 - (d) Onagraceae.

3. Discuss the floral characters and economic importance of the following families
 - (a) Oleaceae
 - (b) Pedaliaceae
 - (c) Cyperaceae.

 4. Write notes on the following :
 - (a) Flora and Monograph.
 - (b) Role of Anatomy in solving Taxonomic problems.

 5. Give an account of Numerical Taxonomy.

 6. Write a detailed account on Bentham and Hooker system of classification. Add a note on its merits and demerits.

 7. Explain the following :
 - (a) Botanical keys.
 - (b) Botanical gardens.
 - (c) Phyto chemistry in relation on Taxonomy.

 8. Give an account on Biosystematics.
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Reg. No. :

D 2121

Q.P. Code : [D 09 PBO 08]

(For the candidates admitted from 2009 onwards)

M.Sc. DEGREE EXAMINATION, MAY 2013.

Second Year

Botany

BIOTECHNOLOGY AND GENETIC ENGINEERING

Time : Three hours

Maximum : 100 marks

Answer any FIVE of the following.

All questions carry equal marks.

(5 × 20 = 100)

1. What is IPR? Give an account of copy right and its limitations.
2. Define gene bank? Construct a gene bank through plasmids.
3. Discuss the applications and industrial production of Biofuels – Ethanol.
4. Give an account of biochemistry of penicillin production and its application.

5. What is BGA? Discuss the mass cultivation of BGA and its field application.
 6. Role of Taq polymerases in PCR and programming of PCR.
 7. How to produce multiple copies of desired gene by *in vivo* method and its application?
 8. Define plasmids. Discuss their classification, isolation and purification of plasmid DNA.
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Reg. No. :

D 2122

Q.P. Code : [D 09 PB 009]

(For the candidates admitted from 2009 onwards)

M.Sc. DEGREE EXAMINATION, MAY 2013.

Second Year

Part III — Botany

PLANT PHYSIOLOGY AND BIOCHEMISTRY

Time : Three hours

Maximum : 100 marks

Answer any FIVE of the following.

All questions carry equal marks.

(5 × 20 = 100)

1. Write notes on
 - (a) Osmosis.
 - (b) Water potential.
 - (c) Translocation of water.
2. Give an account on mechanism of photosynthesis.
3. Explain the following:
 - (a) Glycolysis.
 - (b) Pentose Phosphate pathway.

4. Discuss the following.
 - (a) Classification of Enzyme.
 - (b) Enzyme kinetics.
 5. Explain the classification as properties of lipids.
 6. Write notes on
 - (a) Mechanism of stomatal Transpiration.
 - (b) Light reaction in Photosynthesis.
 7. Give an account on classification, structure and properties of carbohydrates.
 8. Explain the following.
 - (a) Laws of Thermodynamics.
 - (b) Zwitter ions.
 - (c) Steroids.
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Reg. No. :

D 2123

Q.P. Code : [D 09 PBO 10]

(For the candidates admitted from 2009 onwards)

M.Sc. DEGREE EXAMINATION, MAY 2013.

Second Semester

Botany

Special Paper – FOOD SCIENCE AND NUTRITION

Time : Three hours

Maximum : 100 marks

Answer any FIVE of the following.

All questions carry equal marks.

(5 × 20 = 100)

1. Explain the recommended allowances for Indian diets and compare with that of FAD/WHO standard.
2. Write an account on the composition and methods of Cooking Dhals and Nuts.
3. Explain the following :
 - (a) Nutritional values of Carbohydrates
 - (b) Protein-malnutrition.

4. Discuss the following :
 - (a) Role of fat in Causing athrosclerosis
 - (b) Indices of protein quality evaluation.
 5. Write an account on Naturally occurring carcinogens. Add a note on the physiological role and prevention of Toxicity.
 6. Give an account on dietary planning to meet the requirements at different socio-economic levels.
 7. Explain the following :
 - (a) Composition of pulses
 - (b) Nutritional values of lipids
 - (c) Essential amino acids.
 8. Describe the following :
 - (a) Protease inhibitors
 - (b) Haemoagglutinins
 - (c) Allergens.
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Reg. No. :

D 2124

Q.P. Code : [D 09 PBO 11]

(For the candidates admitted from 2009 onwards)

M.Sc. DEGREE EXAMINATION, MAY 2013.

Second Year

Part III — Botany

Special Paper — HORTICULTURE

Time : Three hours

Maximum : 100 marks

Answer any FIVE of the following.

(5 × 20 = 100)

1. Explain the following:
 - (a) Organic fertilizers (6)
 - (b) Biofertilizers (6)
 - (c) Soil types. (8)
2. Draw a lay out for college garden. Explain the various components of the garden. (20)
3. Write notes on:
 - (a) Cultivation of mango. (10)
 - (b) Cultivation of potato. (10)

4. Write notes on:
- (a) Pest Management. (10)
 - (b) Weed problem and Ecological perspective. (10)
5. Explain the following:
- (a) Growth retarders. (8)
 - (b) Sex modification (6)
 - (c) Parthenocarpy. (6)
6. Write notes on:
- (a) Layering method (8)
 - (b) Grafting methods (8)
 - (c) Budding method. (4)
7. Explain the following:
- (a) Bonsai technique and types (7)
 - (b) Training and Pruning (6)
 - (c) Lawn making. (7)
8. Write notes on:
- (a) Glass houses (8)
 - (b) Seed storage structures (6)
 - (c) Preservation of fruits. (6)
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Reg. No. :

D 1096

Q.P. Code : [D 09 PBO 12]

(For the candidates admitted from 2009 onwards)

M.Sc. DEGREE EXAMINATION, DECEMBER 2012

MAY 2013

Second Year

Botany

Elective — FOREST BOTANY

Time : Three hours

Maximum : 100 marks

Answer any FIVE of the following.

(5 × 20 = 100)

1. Write notes on the following:
 - (a) Forest and climate (7)
 - (b) Forest and ecosystem (7)
 - (c) Forest and biodiversity (6)

2. Explain the following:
 - (a) Forest genetics (5)
 - (b) Forest physiology (8)
 - (c) Forest ecology (7)

3. Write an account on the classification and characteristic features of world forests and Indian forests. (20)
 4. (a) Explain the methods by which growth of trees are estimated. (10)
(b) Write a brief account on seed dynamics in forest ecosystem. (10)
 5. Give an account on the role of forestry for social and national development. (20)
 6. Explain the characteristic features and the flora of tropical, temperate, evergreen and deciduous forest types. (20)
 7. Write an account on major and minor forest products. (20)
 8. (a) Give an account on silviculture. (10)
(b) Discuss nitrogen and mineral nutrition in forest. (10)
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Reg. No. :

D 1097

Q.P. Code : [D 09 PBO 13]

(For the candidates admitted from 2009 onwards)

M.Sc. DEGREE EXAMINATION, DECEMBER 2012.

Second Year

Botany

Elective – ETHNOBOTANY

Time : Three hours

Maximum : 100 marks

Answer any FIVE of the following.

(5 × 20 = 100)

1. Describe the relationship between man and plants with reference to carminatives and Gastro-intestinal regulators.
 2. Write an account on the linkage of Ethnobotany with Sociological, Religious and cultural practices.
 3. Explain the various methodologies followed in Ethno-Botanical research.
 4. Give an account on the relation between Geology, Phyto-geography and Ethnobotany.
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5. Describe the relationship between man and plants with special reference to Antitumour, Antidiabetics and Antimalarials.
 6. Explain the linkage of Ethnobotany with medicine and food and nutrition.
 7. Discuss the Ethnobotanical and Ethno-Biological Heritage of Mulla, Kanikkars, Naikas and Thodas.
 8. Write notes on following:
 - (a) Forestry and Ecosystem. (10)
 - (b) Conversation of plants in sacred groves. (10)
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