

5. Describe the process of mitosis and add a note on the schematic sketch on different phase of mitosis.
 6. Explain chromosomal aberration. Add a note on the types of chromosomal translocation.
 7. Describe the structure of DNA as described by Watson and Crick.
 8. Write note on principle, functions of fluorescent microscopy.
-

Reg. No. :

D 1105

Q.P. Code : [D 09 PBO 04]

(For the candidates admitted from 2009 onwards)

M.Sc. DEGREE EXAMINATION, DECEMBER 2013.

Second Year

Part III – Botany

CELL AND MOLECULAR BIOLOGY

Time : Three hours

Maximum : 100 marks

Answer any FIVE questions.

All questions carry equal marks.

(5 × 20 = 100)

1. Define Ribosomes – Explain their key role in protein construction team.
2. Explain the discovery, structure, function transport mechanism of golgi apparatus and its origin.
3. Explain the ultra structure of cell wall.
4. Draw the structure of nucleus and discuss about the nuclear membrane and chromosomes.

5. Write an essay on water pollution and Explain the control measures.
 6. Explain Air pollution and its control measures.
 7. Write an essay on Environmental Education Programmes.
 8. Explain the laws for conservation of forest.
-

Reg. No. :

D 1107

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

(For the candidates admitted from 2007 onwards)

M.Sc. DEGREE EXAMINATION, DECEMBER 2013.

Second Year

Part III – 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. Explain the History and Scope of Ecology.
2. Describe the various methods of studying plant community.
3. Explain the carbon and phosphorus cycles.
4. Write an essay on Ecological indicators.

3. Discuss the global characters and economic importance of the following families:
- Tiliaceae
 - oleaceae
 - Pedaliaceae
4. Write short notes on:
- Botanical gardens
 - Botanical keys
 - Role of embryology in taxonomy.
5. Give an account on:
- Biosystematics
 - Phenotypic plasticity.
6. Write an account on numerical taxonomy.
7. Give an account on Engler and Prante system of classification. Add a note on its merits and demerits.
8. Explain the following:
- Flora and monograph
 - Floral characters of Apocynaceae
 - Important features of Commelinaceae.

Reg. No. :

D 1108

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

(For the candidates admitted from 2007 onwards)

M.Sc. DEGREE EXAMINATION, DECEMBER 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)

- Write an account on classification of angiosperm by Takhtajau.
 - Typification.
- Explain the important characters of the following families:
 - Polygalaceae
 - Oxalidaceae
 - Onagraceae
 - Lythraceae.

5. What is transgenic plants? Discuss their various desired traits with suitable example.
 6. Write an account on genes involved in Nitrogen fixation.
 7. What is Biofertilizer? Give an account on production of Rhizobial inoculants.
 8. What is Bio insecticide? Explain the role of predators as pest control agents.
-

Reg. No. :

D 1109

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

(For the candidates admitted from 2009 onwards)

M.Sc. DEGREE EXAMINATION, DECEMBER 2013.

Second Year

Part III — Botany

BIOTECHNOLOGY AND GENETIC ENGINEERING

Time : Three hours

Maximum : 100 marks

Answer any FIVE questions.

All questions carry equal marks.

(5 × 20 = 100)

1. Discuss the gene transfer methods in plants.
2. Synthetic seeds! A new conception in seed Biotechnology. Explain.
3. Write an account on IPR practice in Scientific companies.
4. Briefly discuss the enzymes involved in rDNA technology.

3. Write notes on :
 - (a) Glycolysis.
 - (b) TCA cycle.
4. Give an account on Carbohydrates.
5. Write short notes on:
 - (a) Isoelectric points.
 - (b) Zwitter ions.
 - (c) Plant Waxes.
 - (d) Steroids.
6. Write an account on mechanism of absorption of water.
7. Explain the following ;
 - (a) Glycolate metabolism.
 - (b) Oxidative phosphorylation.
8. Write an account on protein classification, properties and structure.

Reg. No. :

D 1110

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

(For the candidates admitted from 2009 onwards)

M.Sc. DEGREE EXAMINATION, DECEMBER 2013.

Second Year

Part III — Botany

PLANT PHYSIOLOGY AND BIOCHEMISTRY

Time : Three hours

Maximum : 100 marks

Answer any FIVE of the following.

(5 × 20 = 100)

1. Explain the following :
 - (a) Biological significance of Water.
 - (b) Mechanism of stomatal transpiration.
2. Describe the following :
 - (a) Photo synthetic pigments.
 - (b) Calvin cycle.

3. Write notes on the following :
 - (a) Role of dietary fibers in food
 - (b) Protein – malnutrition.
4. Explain the following :
 - (a) Indices of protein quality evaluation
 - (b) Athrosclerosis.
5. Give an account on naturally occurring carcinogens and explain the physiological role and prevention of Toxicity.
6. Explain the recommended allowances for Indian diets and compare with that of FAD / WHO.
7. Write an account on the composition and methods of Cooking Dhals and Nuts.
8. Explain the following :
 - (a) Protense Inhibitors
 - (b) Cyanogens
 - (c) Food toxicants.

Reg. No. :

D 1111

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

(For the candidates admitted from 2009 onwards)

M.Sc. DEGREE EXAMINATION, DECEMBER 2013.

Second Year

Part III – Botany

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 following :
 - (a) Nutritional requirements and allowances
 - (b) Different groups of food materials.
2. (a) Discuss the various methods of processing of pulses and grams.
 - (b) What is the composition of principle constituents of food in pulses?

4. Explain the following :
 - (a) Biological control of weeds
 - (b) Biological control of insect pest.
5. Give an account of various growth regulators used in Horticulture practice.
6. Explain the different methods of plant propagations followed in Horticulture.
7. Describe the various components of an out door Garden.
8. Write short notes on :
 - (a) Flower arrangement
 - (b) Training and pruning
 - (c) Parthenocarpy.

Reg. No. :

D 1112

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

(For the candidates admitted from 2009 onwards)

M.Sc. DEGREE EXAMINATION, DECEMBER 2013.

Second Year

Botany

HORTICULTURE

Time : Three hours

Maximum : 100 marks

Answer any FIVE of the following.

All questions carry equal marks.

(5 × 20 = 100)

1. Write an account on the role of chemical fertilizers used for Horticulture plants.
2. Explain the following :
 - (a) Lawn making and maintenance
 - (b) Bonsai and its types.
3. Write an account on the following :
 - (a) Cultivation of mango
 - (b) Cultivation of Ginger.

3. Write an account on the concept and scope of silviculture. (20)
 4. Give an account on seed dynamics in forest ecosystem. (20)
 5. Explain the different methods of estimation of forest biomass. (20)
 6. Write an account on forest pollution and add a note on its control measures. (20)
 7. Write brief notes on the following :
 - (a) Forest and Biodiversity (10)
 - (b) Forest and gene conservation. (10)
 8. Give an account on the classification and characteristics of Indian forests.
-

Reg. No. :

D 1113

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

(For the candidates admitted from 2009 onwards)

M.Sc. DEGREE EXAMINATION, DECEMBER 2013.

Second Year

Botany

FOREST BOTANY

Time : Three hours

Maximum : 100 marks

Answer any FIVE of the following.

Each question carry equal marks.

(5 × 20 = 100)

1. Write notes on the following :

- (a) Deciduous forest (5)
- (b) Evergreen forest (5)
- (c) Social forest (5)
- (d) Industrial forestry. (5)

2. Discuss the following :

- (a) Forest ecosystem (12)
- (b) Hydrological cycle. (8)

Q. P. Code: D09PB013

(For candidates admitted from 2009 onwards)
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ETHNOBOTANY

Maximum: 100 marks

Time: 3 Hours

Answer any FIVE of the following (5 X 20 = 100)

1. How the wildlife act to protect the tribes' knowledge and wild herb resource?
2. Write in detail about sacred groves and its importance to human society.
3. Discuss the development and destructive strategies on ethnobotanical view.
4. How the ethnobotany link with other science disciplines? Give some examples.
5. Write an essay about south India tribes and their life style.
6. Describe the ethnobotanical heritage and its importance of our country tourists.
7. Give a detail account on landmarks in history of ethnobiology. Explain its contribution to human.
8. How the phytoecography linked to various tribal group traditional practices coincidence? Give some examples.

