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Reg. No. : .....

**D 2114**

**Q.P. Code : [D 09 PBO 01]**

(For the candidates admitted from 2009 onwards)

M.Sc. DEGREE EXAMINATION, MAY 2013.

First Year

Botany

**PHYCOLOGY, MYCOLOGY, BACTERIOLOGY AND  
VIROLOGY**

Time : Three hours

Maximum : 100 marks

Answer any FIVE questions from the following.

Draw diagrams wherever necessary.

All questions carry equal marks.

(5 × 20 = 100)

1. Give an account on :
  - (a) Classification of Algae by Fritsch.
  - (b) Economic importance of algae.
  
2. Explain the following :
  - (a) Host-parasite interaction
  - (b) Heterothallism in fungi.

3. Write an account on :
    - (a) Classification of Lichens by Hale.
    - (b) Economic importance of Lichens.
  4. Explain the following :
    - (a) Growth curve of bacterial population
    - (b) Industrial production and uses of Lactic acid.
  5. Write notes on the following :
    - (a) Isolation and purification of plant viruses
    - (b) Cauliflower mosaic virus.
  6. Give an account on different life cycles in Algae.
  7. Write an account on classification of Fungi by Alexopoulos and Mims.
  8. Explain the following :
    - (a) Reproduction in Ascolichens
    - (b) Industrial production and uses of Vinegar.
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**D 2115**

**Q.P. Code : [D 09 PBO 02]**

(For the candidates admitted from 2009 onwards)

M.Sc. DEGREE EXAMINATION, MAY 2013.

First Year

Part III – Botany

**BRYOPHYTES, PTERIDOPHYTES AND  
GYMNOSPERMS**

Time : Three hours

Maximum : 100 marks

Answer any FIVE questions from the following.

Draw diagram wherever necessary

All questions carry equal marks.

1. Explain the following:
  - (a) Classification of bryophytes by reimers.
  - (b) Economic importance of bryophytes.
  
2. Describe the following.
  - (a) Anatomical structure of stem of psilotum
  - (b) Reproduction on lygodium.

3. Explain the following
  - (a) Stelar evolution in pteridophytes.
  - (b) Heterospory and seed habits in pteridophytes.
4. Write an account on the external features and affinities of Bennettitales.
5. Explain the following
  - (a) External features of cordaitales
  - (b) Angiospermic characters of Gnetales.
6. Discuss the following:
  - (a) Sporocarp of Anthocerotales
  - (b) Fossil Bryophytes.
7. Write notes on the following
  - (a) Anatomical structure of sorus of Nephrolepis.
  - (b) Sorus evolution in pteridophytes.
8. Give an account on the external features and affinities of Pentoxylales.

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**D 2116**

**Q.P. Code : [D 09 PBO 03]**

(For the candidates admitted from 2009 onwards)

M.Sc. DEGREE EXAMINATION, MAY 2013.

First Year

Botany

**GENETICS, PLANT BREEDING AND  
BIOSTATISTICS**

Time : Three hours

Maximum : 100 marks

Answer any FIVE questions from the following.

All questions carry equal marks.

(5 × 20 = 100)

1. Explain the following:
  - (a) Quantitative inheritance with suitable example.
  - (b) List chemical mutagens and explain their mode of action.
2. Discuss the following :
  - (a) Modern concept of genes.
  - (b) Population genetics.

3. Explain the role of polyploidy in plant improvement.
4. Write notes on :
  - (a) Red data books
  - (b) Patent and intellectual properties rights.
5. Give an account on :
  - (a) Significance of chi – square test
  - (b) Data collection and representation of graph and tabulation.
6. Explain the following with a suitable example :
  - (a) Law of independent assortment
  - (b) Lethal factor.
7. Write an account on extra chromosomal inheritance with suitable examples.
8. Write notes on
  - (a) Role of IBPGR and NBPGR in germplasm conservation.
  - (b) Standard deviation and Standard error.

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**D 2117**

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

(For the candidates admitted during 2009 onwards)

**M.Sc. DEGREE EXAMINATION, MAY 2013.**

**First Year**

**Botany**

**CELL AND MOLECULAR BIOLOGY**

**Time : Three hours**

**Maximum : 100 marks**

**Answer any FIVE questions.**

**All questions carry equal marks.**

**(5 × 20 = 100)**

1. Describe the morphology functions and chemistry of cell wall components.
2. Give an account on nucleus and its components along with its functions.
3. Explain the process of meiosis and add a note on the schematic sketch on different phase of meiosis.
4. Write an account on DNA replication.

5. Give an account on principle and functions of Electron Microscopy.
  6. Explain vesicle transport mechanism of Golgi apparatus.
  7. Give a brief note on Reciprocal and Robertsonian types of translocation and their role in disease.
  8. Discuss the Enzymes involved in DNA Replication.
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D 2118

Q.P. Code : [D 09 PBO 05]

(For the candidates admitted from 2009 onwards)

M.Sc. DEGREE EXAMINATION, MAY 2013.

First Year

Part III — Botany

ANATOMY, EMBRYOLOGY AND TISSUE CULTURE

Time : Three hours

Maximum : 100 marks

Answer any FIVE questions.

All questions carry equal marks.

(5 × 20 = 100)

1. Describe the leaf anatogeny of monocot and Dicots.
2. Write an essay on classification of meristems.
3. Explain about compression wood and tension wood.
4. Describe the structure and types of ovules.
5. Explain the process of fertilization.

6. Write an essay on embryology in relation to taxonomy.
  7. Explain the role of growth promoting substances in tissue culture.
  8. Write notes on :
    - (a) Meristem culture.
    - (b) Cryopreservation.
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