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M. Sc.-IV Sem.

14116

M. Sc. Examination, June 2016

BOTANY-XIII

Modern Phytotechniques & Biostatistics

(H-4001)

Time : Three Hours]

[Maximum Marks : 50

Note: Attempt questions from all Sections as per instructions.

**Section-A**

**(Very Short Answer Questions)**

Attempt all the *five* questions. Each question carries 2 marks.  $2 \times 5 = 10$

1. Write short note on Haematoxylin. 2
2. Differentiate between median and mode. 2
3. Which factors influence staining process? 2

4. Paraffin is a preferable embedding medium of choice during microtomy, why? 2
5. What are main applications of cell sorting? 2

**Section-B**

**(Short Answer Questions)**

Attempt any *two* questions out of the following three questions. Each question carries 5 marks.  $5 \times 2 = 10$

6. What precautions are taken into consideration, while preservation and storage of plant material is done? 5
7. Comment upon the following: 5  
(a) ELISA  
(b) Immunoblotting.
8. Write short notes on the following: 5  
(a)  $\chi^2$ -test and its significance  
(b) How we calculate Standard Deviation and its application?

**Section-C**

**(Long Answer Questions)**

Attempt any *three* questions out of the following five questions. Each question carries 10 marks.  $10 \times 3 = 30$

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9. Explain the classification of data and its objectives. Discuss the different methods of classification. 10
  
10. Define centrifuge and centrifugal force. What is the basic principle of centrifugation ? Explain instrumentation of high speed centrifuge. 10
  
11. Define spectrophotometry. Explain in detail MS and its applications. 10
  
12. Write notes on the following: 10
  - (a) Mean Deviation
  - (b) Standard error
  - (c) Mean and its merits and demerits.
  
13. Define TLC. Give in detail its methodology and applications. 10