

B.Sc. Sem-IV
Practical Examination 2021
BOTA
Paper: CC-8 (Plant Geography, Ecology and Evolution)

F.M.- 30

Time: 1h 30 mins

Answer **any three** questions:

- 1.a) In which Phytogeographical region you can put Sikkim? (1)
b) Name some important plants you can find in Sikkim Himalayan region. (5)
c) What is the importance of field trip during phytogeographical study? (4)

- 2.a) What is Quadrat? (2)
b) What is the minimal size of a Quadrat? (2)
c) What is the frequency of a Quadrat? (2)
d) What is the density of Quadrat? (2)
e) What is the importance of Quadrat analysis? (2)

- 3.a) Why Quadrat method is important? (5)
c) What are the different types of Quadrat? (5)

- 4.a) What are the requisitions you need to study a Quadrat? (2)
b) What are the different types of area measurement of a Quadrat study? (2)
c) Write the procedure of Quadrat study. (6)

- 5.a) Write a note on ecological succession. (4)
b) Discuss the different successional stages in a Hydrosere. (6)

UNIVERSITY OF CALCUTTA
FAKIR CHAND COLLEGE CENTRE
B.Sc.(H) SemIV Practical Examination 2021
(BOT-A-CC-9-P)

F.M. 30

Time 1h 30min

Write any three of the following:

- | | |
|---|-----|
| 1. a) Draw a labeled sketch of TS/LS of rice grain | 5 |
| b) Mention the processing of jute fiber. | 5 |
| 2. a) Write scientific name and family of tea. | 2+3 |
| Write the characters of different type of tea. | |
| b) Draw a habit sketch of Mustard- plant. | 5 |
| 3. a) Write the scientific name of a timber yielding plant | 1 |
| b) Mention uses of cotton | 3 |
| c) Give scientific name of Tobacco plant | 1 |
| d) Mention one use of Digitalis | 1 |
| e) Write scientific name and family of mustard | 2 |
| f) What are the uses of soybean. | 2 |
| 4. a) Draw a habit sketch of cannabis. | 5 |
| b) Write the micro chemical test of lipid found in legume seed. | 5 |
| 5. a) Mention chemical test for tannin. | 3 |
| b) Write use of potato. | 3 |
| c) Write importance of mung bean in respect of environment | 2 |
| d) What is maceration? | 2 |

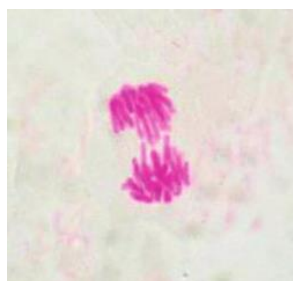
B.Sc. Sem-IV
Practical Examination 2021
BOTA
Paper: CC-10 (GENETICS (BOT-A-CC-4-10-P))

F.M.- 30

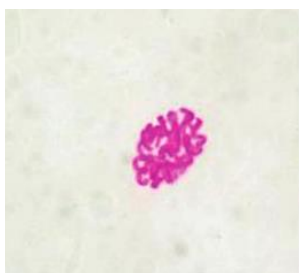
Time: 1h 30 mins

Answer following question (any three)

1. i) What is the F₂ ratio of complementary gene interaction? Cite an example of this type of interaction. 2
 ii) What is test cross? 2
 iii) Write down the gametes from AaBbCc 2
 iv) The diploid number of an organism is 12. How many chromosomes would be expected in a monosomic and nullisomic condition? 2
 v) What are loci? 2
2. i) Name two stains commonly used in studying plant mitosis 2
 ii) Write the procedure for making 2% Aceto-orcein solution. 2
 iii) Name two pre-treating agents? 2
 iv) Define fixation. Name two common fixatives. 2+2
3. Identify the following specimen (A to D) with proper reason 2½×4



Specimen A



Specimen B

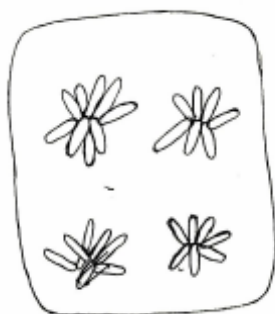


Specimen C

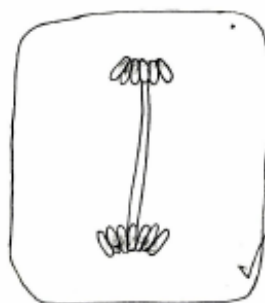


Specimen D

4. Identify the specimen (A & B) of abnormal stages with proper reason 5×2



Specimen A



Specimen B

5. Write the procedure, observation and free hand drawing of studying mitotic chromosome of *Aloe* species 3+4+3