PG/IIIS/BOT396.1(C)
/23(Pr.) (New)

M.Sc. 3rd Semester Examination, 2023

BOTANY

(*Cell Biology and Genetics*)

(Practical)

PAPER – 396.1 (C)

Full Marks : 25

Time : 3 hours

Answer **all** questions as directed

The figures in the right hand margin indicate marks

Candidates are required to give their answers in their own words as far as practicable

A. Perform the *tick marked* problem of the following (any *one*): 12

1. Work out the **Sample A**, displaying cells at any two stages of reductional division and

any other two stages of equational division of meiosis. Draw and describe all the shown stages. 3×4

2. Make a squash preparation of **Sample B**. Display a mitotic metaphase plate ideal for karyotyping. Carry out the karyotypic analysis commenting on the symmetric /asymmetric nature of it. $4 + 8$

3. Work out the **Sample C** to find out four different types of mitotic abnormalities. Draw, describe the divisional phases highlighting the nature of their respective abnormalities. 3×4

B. Perform the *tick marked* item of the following (any *one*) : 8

4. Perform the pollen tube germination test with the **Sample D** under the treatment of different concentrations of the supplied solution of

known concentration. Compare the performance under different concentrations with respect to the speed and frequency of germination.

5. Conduct the viability test of the pollens of the **Sample E**. 2

6. Laboratory note book 3
