

Raja N. L. Khan Women's College (Autonomous)
End Semester Examinations-2022

BOTANY [PG-CBCS]

[M.Sc] (Practical)

PAPER-305A

Cell Biology, Genetics and Biotechnology

Full Marks: 25

Time: 02Hrs

Answer all questions

1. Perform the experiment as instructed by examiner

i) Test Cross progeny-

(3-3+2=8)

Seed trait	Gamete	Number
Red, shrunken, normal	CsW	2777
White, plump, waxy	cSw	2708
Red, plump, waxy	CSw	116
White, shrunken, normal	csW	123
Red, shrunken, waxy	Csw	643
White, plump, normal	cSW	626
Red, plump, normal	CSW	4
White, shrunken, waxy	csw	3
Total number of progeny		7000

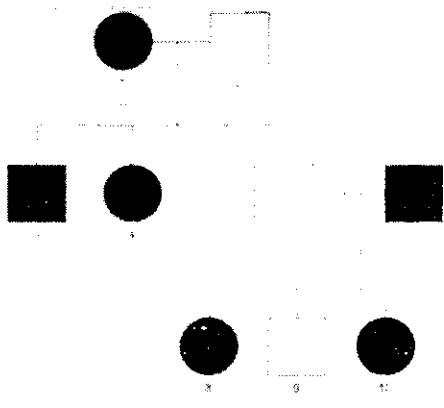
For this above dataset, find out the following-

- Arrangement of the genes (C, S and W)
- Distance between each of the genes
- Coefficient of coincidence.

OR

ii) Work out the supplied sample (onion bud) and find two divisional stages. Draw, label and identify these two stages. (work out-2, stage finding-2, drawing and labeling-2, Identify- 2)

Q.2- Perform the experiment as instructed by the examiner



Contd... P/2

- i) In the above pedigree, the affected individuals are shown shaded. What is the inheritance pattern for this trait and why? (6)

OR

- ii) A set of sample seeds have been provided to you. Explain the result with χ^2 - analysis.

Q3- Identify A, B and C with proper reasons 2X3=6

Q4- laboratory note book- 2

Q5- Viva voce- 3