22-23/31351

M.Sc. 3rd Semester Examination-2022-23

BOTANY

Course ID : 31351 **Course Code : BOT/301C (TH)**

Course Title : Cytogenetics and Plant Breeding Biostatistics

Time : 2 Hours *Full Marks* : 30

The figures in the right hand margin indicate full marks.

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

Group – A

(Cytogenetics and Plant Breeding)

1. Answer **any *two*** questions : 1×2=2

(a) What is MPF? Give an example.

(b) What is retransponson? Cite and example.

(c) Give an example of a software for primer designing.

(d) Mention the names of two cancer causing retroviruses in human beings.

(b) What is cluster sampling ?

(c) How arrayed data are generated by biostatisticians ?

(d) Define null hypothesis.

2. Answer **any *one*** question : 5×1=5

(a) In an experiment, 5 different sets of Hydrilla plants showed O2 evolution/hour, was recorded. 2.5 cc/hr, 1.8 cc/hr, 2.0 cc/hr, 2.2 cc/hr and 2.4 cc/hr. Calculate the harmonic mean. 5

(b) What is the purpose of tabular representation of data ? Briefly describe different types of tables. 2+3

3. Answer **any *one*** question : 8×1=8

(a) In two different populations (Batch I and Batch II) the seeds number/fruit was calculated :

Batch I 7, 9, 6, 8, 6, 5, 7, 8, 6, 8

Batch II 10, 8, 9, 10, 11, 10, 5, 6, 4, 7

Calculate the coefficient of variations and comment on the outcome. 6+2=8

(b) From a plant after selfing total 96 seeds are harvested of which yellow seeds are 79 and brown seeds are 17. Explain the result with Chi-square analysis in the context of a particular Mendelian ratio and comment on the outcome. 5+3=8

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