

U.G. 5th Semester Examination - 2021**STATISTICS****(HONOURS)****Course Code : STAT(H)CC-12****[PRACTICAL]****Linear Models - Lab**

Full Marks : 25(20+5)

Time : 2 Hours

*The figures in the right-hand margin indicate marks.**Candidates are required to give answers in their own words as far as practicable.**Notations and symbols have their usual meaning.*

1. An experiment was conducted to determine the effects of different dates of planting and different methods of planting on the yields of sugar cane. The table below shows the yields of sugar-cane (in kg.) for four different dates and three methods of planting.

Date of Planting → Method of Planting	January	February	May	June
A	7.2	3.7	4.5	2.0
B	10.5	4.9	4.6	2.5
C	8.1	3.3	4.8	1.7

- a) Carry out an analysis of the above data.

- b) State if the yield differs with different dates of planting?
- c) If the result of (b) is affirmative, determine the best date of planting using a fixed effect model. 6

2. For the following data fit a linear regression equation of y on x:

y : 10 12 15 18 20 22 26

x : 50 60 69 45 42 70 78

Find the R_2 value and comment. Also plot the residuals of the fitted values and comment on your fitting. 4

3. Practical Note Book 5
4. Viva-voce 5

[Internal Assessment – 5]
