STELLA MARIS COLLEGE (AUTONOMOUS) CHENNAI – 600 086
(For candidates admitted from the academic year 2019 – 2020)

SUBJECT CODE: 19EC/PC/RM24

M.A. DEGREE EXAMINATION, MAY 2021
BRANCH IV – ECONOMICS

COURSE: MAJOR CORE **MAX. MARKS: 20**
PAPER: RESEARCH METHODS AND ANALYSIS II (PRACTICAL)
TIME: 1 HOUR

SECTION – B **(4 X 5 = 20)**

ANSWER ALL QUESTIONS.

1. Represent the following data of agricultural production graphically.

Year	Rice	Wheat	Pulses	Coarse Cereals
2015-16	91.80	69.40	13.40	34.10
2016-17	93.40	75.80	14.20	33.90
2017-18	96.69	78.57	14.76	40.76
2018-19	99.15	80.58	14.66	39.48
2019-20	89.09	80.80	14.66	33.55
2020-21	94.01	81.47	16.51	40.08

2. Consider the following regression model:

$$\frac{1}{Y_i} = \beta_1 + \beta_2 \left(\frac{1}{X_i}\right) + u_i$$

(Note: Neither Y nor X assumes zero value.)

a. Is this a linear regression model?
b. How would you estimate this model?
c. What is the behaviour of Y as X tends to infinity?
d. Can you give an example where such a model may be appropriate?

3. Pepsi & Co. wishes to test whether its three salesmen Kim, Jim and Tom tend to make sales of the same size or whether they differ in their selling ability as measured by the average size of their sales. During the last week there have been 14 sales calls made by the three salesmen. Kim made 5 calls, Jim made 4 calls and Tom made 5 calls. Following are the weekly sales (Rs. in thousands) recorded by them.

Kim	Jim	Tom
300	600	700
400	300	300
300	300	400
500	400	600
0	-	500

Perform the Analysis of Variance and draw your conclusions.

4. 10 persons were appointed in a managerial position in an office. Their performance was noted by giving a test and the marks recorded out of 50. They were given 6 months' training and again they were given a test and marks were recorded out of 50.

Employees	A	B	C	D	E	F	G	H	I	J
Before Training	25	20	35	15	42	28	26	44	35	48
After Training	26	20	34	13	43	40	29	41	36	46

Can it be concluded that the employees have benefitted by the training? (Given $t_{0.05} = 2.262$)