THE AMERICAN COLLEGE, MADURAI

(An Autonomous Institution Affiliated to Madurai Kamaraj University)

Re-accredited (2nd Cycle) by NAAC with Grade "A", CGPA – 3.46 on a 4-point scale

Backlog Arrear Examination, March 2021

MAS 2472/2452/MIC   **Time: 3hrs**

Biostatistics   **Max: 75marks**

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Answer any FIVE questions: **5×15=75**

1. Describe about the characteristics of Statistics and its scope.

2. From the following data of the height of 100 plants in a garden, determine the modal height.

Height (cm)	58	60	61	62	63	64	65	66	68	70
Plants(No.)	4	6	5	10	20	22	24	6	2	1

3. Find the (i) Mean (ii) Median (iii) First quartile for the following frequency distribution.

class	Frequency	class	frequency
11-15	8	36-40	41
16-20	15	41-45	28
21-25	39	46-50	16
26-30	47	51-55	4
31-35	52	**Total**	**250**

4. The coefficient of rank correlation of marks obtained by 10 students in Mathematics and Physics was found to be 0.8. It was later discovered that the differences in ranks in two subjects obtained by one of the students was wrongly taken as 5 instead of 8. Find the correct coefficient of rank correlation.

5. The following data relate to the marks of 10 students in the internal test and the university examination for the maximum of 50 in each. (i) Obtain the two regression equations. (ii) obtain the most likely internal mark for the university mark of 25.

Internal marks	25	28	30	32	35	36	38	39	42	45
University marks	20	26	29	30	25	18	26	35	35	46

6. An insurance agent accepts policies of 5 men all of identical age and in good health. The probability that a man of this age will be alive 30 years hence is 2/3. Find the

probability that in 30 years (i) all five men (ii) at least one man (iii) at most three will be alive.

7. The following is the statistics showing the lives in hours of four batches of electric bulbs sold in different shops. Perform an analysis of variance and state your conclusion.

Batches	S1	S2	S3	S4	S5	S6	S7	S8
A	1600	1610	1650	1680	1700	1720	1800	-
B	1580	1640	1640	1700	1750	-	-	-
C	1460	1550	1600	1620	1640	1660	1740	1820
D	1510	1520	1530	1570	1600	1680	-	-

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