



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

MIM 5511/5441

**BIostatistics, Bioinformatics
& Computer Applications**

Time: 3 Hrs.

Max: 75 Marks

Answer any FIVE questions

(5 x 15 =75)

1. Discuss the features and applications of DNA data bases.
2. Provide insights on protein sequence and structural data bases with reference to proteomic research.
3. Describe the architecture of computers with suitable illustrations.
4. Explain the significance of pharmacogenomics in drug discovery.
5. The following is the zone of inhibition (mm) formed on 12 *E. coli* spread plates treated with three different antibiotics A, B and C respectively.

A	18	16	18	-	-
B	14	18	15	22	-
C	18	16	19	22	20

Test whether there is any significant difference in the effect of antibiotics.

6. A random sample of 6 rats fed on probiotic A and another sample of 9 rats fed on probiotic B recorded following gain in weight (in kgs) over a period of one month.

Probiotic A	4	3	1	2	5	3			
Probiotic B	3	6	5	4	8	9	3	2	5

Test the significance of difference in probiotic A and B with regard to their effect on increase in weight

7. a) Explain the types of bar diagrams with suitable illustrations
b) Describe the various types of scales of measurement of data.
