Course:Calculus and Statistics

Course Outcome

CO1- Find the integration by various methods

CO2- Solve the ordinary differential equations of first order and first degree

CO3- Understand the concepts of measures of central tendency

CO4- Calculate moments, correlation and regression

CO4- Use of dispersion

Printed Pages: 2 **University Roll No. .....**

Mid Term Examination, Even Semester 2021-22

B.Tech (Bio-Tech), IYear, IISemester

BMAS-0131 & Calculus and Statistics

Time: 2 Hours **Maximum Marks: 30**

Instruction for students:

1. Attempt all questions.

Section – A 3 X 5 = 15 Marks

No.	Detail of Question	Marks	CO	BL	KL
1	What do you understand by arithmetic mean? Find out the arithmetic mean of the following data: 12 817 13 159 18 1161.	1+2	3	U,E	P
2	Integrate the function $y = sin^3x$ with respect to $x$by using trigonometric identities.	3	1	A	C
3	Discuss the term biostatistics. Find the mode of the following data: 2,4,5,5,6,7.	1+2	3	U,E	P
4	What do you mean by method of integration by parts and give a suitable example.Find the integration of$y = e^x x^2$ with respect to x,by using integration by parts.	1+2	1	An	C
5	Evaluate: $\int \frac{dx}{x^2-5x+6}$, by using partial fraction method.	3	1	A	P

Section – B

5 X 3 = 15 Mark

No.	Detail of Question	Mar	CO	BL	KL
1	Define the term dispersion.Calculate range, coefficient of range and quartile deviation from the following data: 120 70 150 100 190 170250.	1+4	4	A	C
2	Describe the Median of a frequency distribution.Find the median of the first five odd integers. If the sixth odd integer is also included, then find the difference of medians in these two cases.	5	3	An	M
3	What is the difference between definite and indefinite Integral? Evaluate: (a) $\int_0^4 (e^{2x} + x)dx$ (b) $\int_1^4 (x^2 - x)dx$	1+2+2	1	E	P

CO – Course Outcome, BL – Abbreviation for Bloom's Taxonomy Level (R-Remember, U-Understand, A-Apply, An-Analyze, E-Evaluate, C-Create), KL – Abbreviation for Knowledge Level (F-Factual, C-Conceptual, P-Procedural, M-Metacognitive).