	Lecture Plan	
Name of the college: Government College of Arts , Scien	ce & Commerce, Sanquelim, Goa.	
Name of Faculty: Amit Harichandra Thakur	Subject: Probability Theory	
Paper code: MAT-221	Program: S.Y.B.Sc.	Division: A
Academic year: 2024-25	Semester: IV	Total Lectures: 15
4 Explore and solve problems using key probabilit	y distribution.	
 Expected Course Outcome: The student will be able to, 1. Apply the knowledge of probability theory in 2. Model various probability functions. 3. Illustrate and interpret mathematical expect 4. Solve various problems in probability distributed 	analysing real life situations and case studie ation. Jtions.	25.
Student Learning Outcome: 1. Students will be able to apply fundamental problems in mathematical and statistic	robability concepts, analyse random variable	es and utilise probability distributions to solve real

Month	Lecture From	Lecture To	No. of lectures allotted	Topic, Subtopic to be covered	Exercise/ Assignme nt	ICT Tools	Reference books
December	Week 1 04/12/24	07/12/24	0	Nil			S. C. Gupta, and V. K. Kapoor: Fundamentals of Mathematical Statistics, 12th Edition, Sultan Chand & Sons, 2020.
December	Week 2 09/12/24	14/12/24	01	Introduction of Mathematical expectation	Problem Solving	ChalkBoard	S. C. Gupta, and V. K. Kapoor: Fundamentals of Mathematical Statistics, 12th Edition, Sultan Chand & Sons, 2020.
December	Week 3 16/12/24	21/12/24	00 Liberation Day	Nil			•
January	Week 4 02/01/25	04/01/25	01	Mathematical expectation of discrete and continuous random variables	Problem Solving	ChalkBoard	S. C. Gupta, and V. K. Kapoor: Fundamentals of Mathematical Statistics, 12th Edition, Sultan Chand & Sons, 2020.
January	Week 5		01		Problem Solving	ChalkBoard	S. C. Gupta, and V. K. Kapoor: Fundamentals

	06/01/25	11/01/25		Mathematical expectation of			of Mathematical
				discrete and continuous random			Statistics,
				variables			12th Edition, Sultan
							Chand & Sons, 2020.
January	Week 6		01	Properties, theorems and		ChalkBoard	S. C. Gupta, and V. K.
	WEEK 0	19/01/25		problems on Mathematical			Kapoor: Fundamentals
	13/01/25	10/01/23		expectation			of Mathematical
							Statistics,
							12th Edition, Sultan
							Chand & Sons, 2020.
January	Week 7		01	Properties, theorems and	Problem	ChalkBoard	S. C. Gupta, and V. K.
	WEEK /	25/01/25		problems on Mathematical	Solving		Kapoor: Fundamentals
	20/01/25	23/01/23		expectation			of Mathematical
							Statistics,
							12th Edition, Sultan
							Chand & Sons, 2020.
January-February	Week 8		01	Properties, theorems and	Problem	Chalkboard	S. C. Gupta, and V. K.
	Week o	01/02/25		problems on Mathematical	Solving		Kapoor: Fundamentals
	27/01/25	01/02/25		expectation			of Mathematical
							Statistics,
							12th Edition, Sultan
							Chand & Sons, 2020.
February	Week 9		01	Moments and Moment		Chalkboard	S. C. Gupta, and V. K.
		08/02/25		generating functions;			Kapoor: Fundamentals
	03/02/25	00/02/25					of Mathematical
							Statistics,
							12th Edition, Sultan
							Chand & Sons, 2020.
February	Week 10		01	Moments and Moment	Problem	Chalkboard	S. C. Gupta, and V. K.
	10/02/25	15/02/25		generating functions;	Solving		Kapoor: Fundamentals
	10,02,23	10,02,20					of Mathematical
							Statistics,
							12th Edition, Sultan

							Chand & Sons, 2020.
February	Week 11 17/02/25	22/02/25	01	Properties of generating functions		Chalkboard	S. C. Gupta, and V. K. Kapoor: Fundamentals of Mathematical Statistics, 12th Edition, Sultan Chand & Sons, 2020.
February-March	Week 12 24/02/25	01/03/25	01	Properties of generating functions	Problem Solving	Chalkboard	S. C. Gupta, and V. K. Kapoor: Fundamentals of Mathematical Statistics, 12th Edition, Sultan Chand & Sons, 2020.
March	Week 13 03/03/25	08/03/25	01	Properties of generating functions		Chalkboard	S. C. Gupta, and V. K. Kapoor: Fundamentals of Mathematical Statistics, 12th Edition, Sultan Chand & Sons, 2020.
March	Week 14 10/03/25	15/03/25	00 Holi	Nil			
March	Week 15 17/03/25	22/03/25	01	Properties of generating functions	Problem Solving	Chalkboard	S. C. Gupta, and V. K. Kapoor: Fundamentals of Mathematical Statistics, 12th Edition, Sultan Chand & Sons, 2020.
March	Week 16 24/03/25	29/03/25	01	Uniqueness theorem		Chalkboard	S. C. Gupta, and V. K. Kapoor: Fundamentals of Mathematical Statistics, 12th Edition, Sultan

						Chand & Sons, 2020.
March-April			01	revision	Chalkboard	S. C. Gupta, and V. K.
	Week 17	05/04/25				Kapoor: Fundamentals
		05/04/25				of Mathematical
	31/03/25					Statistics,
						12th Edition, Sultan
						Chand & Sons, 2020.
April			01	Revision	Chalkboard	S. C. Gupta, and V. K.
	Week 18	44/04/05				Kapoor: Fundamentals
	WEEK 10	11/04/25				of Mathematical
	07/04/25					Statistics,
						12th Edition, Sultan
						Chand & Sons, 2020.

* Assessment Rubrics

Component	Max Marks
ISA 1	7.5
ISA 2	7.5
Practical	25
Project	Nil
Semester End	
Exam	60