22CSU206N/22COU206N/22COC206N/22COE206N

PSG COLLEGE OF ARTS & SCIENCE
(AUTONOMOUS)

BCom DEGREE EXAMINATION DECEMBER 2025
(Second Semester)

Common to Branches – CORPORATE SECRETARSHIP
COMMERCE/COMMERCE WITH CA/ E-COMMERCE

STATISTICS

Time: Three Hours   Maximum: 75 Marks

SECTION-A (10 Marks)
Answer ALL questions
ALL questions carry EQUAL marks   (10 × 1 = 10)

Module No.	Question No.	Question	K Level	CO
1	1	Which of the following is NOT a type of data? A) Primary data B) Secondary data C) Hypothetical data D) Grouped data	K1	CO1
	2	Which of the following is used to display continuous data? A) Bar chart B) Histogram C) Pie chart D) Frequency polygon	K2	CO1
2	3	Karl Pearson's coefficient of skewness measures: A) The frequency of data B) The symmetry of data distribution C) The central value of data D) The range of data	K1	CO2
	4	The standard deviation is: A) A measure of central tendency B) A measure of dispersion C) The square root of variance D) Both B and C	K2	CO2
3	5	Karl Pearson's correlation coefficient ranges between: A) -2 to +2 B) -1 to +1 C) 0 to 1 D) -0.5 to +0.5	K1	CO3
	6	In a regression line, the slope represents: A) The intercept B) The total sum of all data points C) The mean of the data set D) The rate of change of the dependent variable with respect to the independent variable	K2	CO3
4	7	Which of the following is a commonly used method to construct index numbers? A) Mode method B) Laspeyres method C) Histogram method D) Regression method	K1	CO4
	8	A fixed base index number uses which of the following for comparison? A) A single base period B) The average of all periods C) The current period D) None of the above	K2	CO4
5	9	If two events are independent, the probability of both occurring is: A) The sum of their individual probabilities B) Always zero C) The product of their individual probabilities D) Always one	K1	CO5
	10	The distribution having the same mean and variance A) Poisson B) Bernouli C) Normal D) Binomial	K2	CO5

SECTION - B (35 Marks)
Answer ALL questions
ALL questions carry EQUAL Marks   (5 × 7 = 35)

Module No.	Question No.	Question	K Level	CO
1	11.a.	Discuss on the preparation questionnaire and its need in data collection.	K4	CO1
		(OR)		
	11.b.	Explain the types of data in classification with examples.		
2	12.a.	Elucidate on any two measures of dispersion with its merits and demerits.	K4	CO2
		(OR)		
	12.b.	Compute the mean and median for the following data: 	Class interval	0-9	10-19	20-29	30-39	40-49	50-59	 	Frequency	1	3	9	11	14	2			
3	13.a.	Explain regression and discuss its properties.	K5	CO3
		(OR)		
	13.b.	The competitors in a beauty contest are ranked by two judges in the following order: 	Applicant	A	B	C	D	E	F	G	H	I	J	 	Judge 1	1	5	4	8	9	6	10	7	3	2	 	Judge 2	4	8	7	6	5	9	10	3	2	1	 Compute the rank correlation coefficient to discuss the two judges have the nearest approach to common tastes in beauty.		
4	14.a.	Discuss the uses of Index numbers	K6	CO4
		(OR)		
	14.b.	Convert the following fixed base index numbers into chain base index numbers. 	Year	2001	2002	2003	2004	2005	2006	2007	 	FBI	376	392	408	380	392	400	410			
5	15.a.	Explain the following with examples: i) Random experiment ii) Exhaustive events iii) Mutually exclusive events iv) conditional events	K5	CO5
		(OR)		
	15.b.	Describe Binomial distribution with examples.		

SECTION -C (30 Marks)
Answer ANY THREE questions
ALL questions carry EQUAL Marks   (3 × 10 = 30)

Module No.	Question No.	Question	K Level	CO
1	16	Discuss the various graphical representations of data.	K4	CO1
2	17	Compute the Pearson's coefficient of skewness from the following data: 	Life time	200-300	300-400	400-500	500-600	600-700	700-800	800-900	900-1000	1000-1100	 	No. of tubes	18	50	62	86	74	64	52	28.	16		K4	CO2
3	18	Construct the regression equation 'x' on 'y' and 'y' on 'x' from the following data: 	x	10	20	30	40	50	60	70	 	y	11	25	35	43	60	67	74		K6	CO3
4	19	Explain Index numbers and discuss its various methods in construction.	K5	CO4
5	20	i) State Multiplication theorem. ii) Three students A,B,C are in running race. A and B have the same probability of winning and each is twice as likely to win as C. Compute the probability that B or C wins.	K5	C05

Z-Z-Z   END