22MSU103N/22MSU103/22ISU103/ 22RMU103N/23BLU103R

PSG COLLEGE OF ARTS & SCIENCE
(AUTONOMOUS)

BBA DEGREE EXAMINATION MAY 2025
(First Semester)

Common to Branches – **BUSINESS ADMINISTRATION/ BUSINESS ADMINISTRATION (INFORMATION SYSTEM)/ BUSINESS ADMINISTRATION (RETAIL MANAGEMENT)/ BUSINESS ADMINISTRATION (LOGISTICS)**

MANAGERIAL 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	Name the additional revenue earned by a company by selling one more unit of a product a) Average revenue b) Marginal revenue c) Marginal cost d) Average cost	K3	CO1
	2	Less than ogives and More than ogives intersect at a) mean b) median c) mode d) harmonic mean	K1	CO1
2	3	What will be the median of 25 , 29 , 25 , 31 , 24 , 27 , 27? a) 24 b) 25 c) 27 d) 29	K3	CO2
	4	Given below the four sets of observations. Which set has the minimum range? a) 46,48,50,52,54 b) 30,40,50,60,70 c) 40,50,60, 70 , 80 d) 48,49,50,51,52	K4	CO2
3	5	How much variance is explained by a correlation coefficient of 0.9? a) 81% b) 90% c) 9% d) 99%	K2	CO3
	6	Which formula may be used for calculation of coefficient of correlation? a) $r = b_{yx} \times b_{xy}$ b) $r = \sqrt{byx \; x \; bxy}$ c) $r = \sqrt{byx + bxy}$ d) $r = \sqrt{byx - bxy}$	K2	CO3
4	7	Index numbers are expressed in a) Ratios b) Squares c) Percentages d) Combinations	K2	CO4
	8	Increase in the number of patients in the hospital due to heat stroke is a) Secular trend b) Seasonal variation c) Cyclical Variation d) Irregular Variation	K1	CO4
5	9	--------- is not a valid data type in MS-Excel. a) Number b) Character c) Label d) Date/time	K3	CO5
	10	The intersection of a column and a row in worksheet is called---- a) Column b) Address c) Value d) Cell	K4	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.	Find the period in which an amount gets doubled at 12% per annum compound interest.	K4	CO1
		(OR)		
	11.b.	Draw the less than type o-give and hence find the median on the basis of the data given below:		

C.I	0-20	20-40	40-60	60-80	80-100
f	40	51	64	38	7

Cont...

2	12.a.	Calculate median and mode from the following data: Profit(in lakhs): 0-10 | 10-20 | 20-30 | 30-40 | 40-50 | 50-60 | 60-70 No. of companies: 18 | 41 | 90 | 131 | 140 | 54 | 15	K3	CO2
		(OR)		
	12.b.	For the data given below compute the quartile deviation. Wage(in Rs): 351-500 | 501-650 | 651-800 | 801-950 | 951-1100 No.of workers: 48 | 189 | 88 | 47 | 28		
3	13.a.	What is correlation? Explain its types with example.	K4	CO3
		(OR)		
	13.b.	From the following information on values of two variables X and Y, find the two regression equations. N=10, $\sum x = 20$, $\sum y = 40$, $\sum x^2 = 240$, $\sum y^2 = 410$ and $\sum xy = 200$		
4	14.a.	An enquiry into the budgets of middle class families in Coimbatore gave the following information: Expenses on: Food 35% | Rent 15% | Clothing 20% | Fuel 10% | Others 20% Price(2005): 150 | 50 | 100 | 20 | 60 Price(2006): 174 | 60 | 125 | 25 | 90 What changes in the cost of living figures of 2006 have taken place as compared to 2005?	K3	CO4
		(OR)		
	14.b.	Explain the method of simple averages of measuring seasonal variation. What are their merits and demerits?		
5	15.a.	Explain how the COUNT,COUNTA, and COUNTIF functions work in Excel.	K4	CO5
		(OR)		
	15.b.	Describe how to use Excel's CORREL function to calculate the correlation coefficient.		

SECTION -C (30 Marks)

Answer **ANY THREE** questions

ALL questions carry **EQUAL** Marks $(3 \times 10 = 30)$

Module No.	Question No.	Question	K Level	CO
1	16	Draw a suitable diagram to represent the following data: Item: Family A | Family B Food: 240 | 300 Clothing: 160 | 300 Rent: 80 | 200 Other Expenses: 200 | 400	K3	CO1
2	17	Compute arithmetic mean and mode: Sales(in lakhs): 0-10 | 10-20 | 20-30 | 30-40 | 40-50 No. of Companies: 14 | 24 | 38 | 20 | 4	K1	CO2
3	18	Compute the coefficient of correlation between X-advertise expenditure and Y-sales: X : 10 12 18 8 13 20 22 15 5 17 Y : 88 90 94 86 87 92 96 94 88 85	K4	CO3
4	19	Explain various components of time series.	K2	CO4
5	20	Discuss the various statistical functions in Excel.	K4	CO5

Z-Z-Z END