

PSG COLLEGE OF ARTS & SCIENCE
(AUTONOMOUS)BBA DEGREE EXAMINATION DECEMBER 2025
(First Semester)Common to Branches - BUSINESS ADMINISTRATION/ BUSINESS ADMINISTRATION (IS)/
BUSINESS ADMINISTRATION (RM) / 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	A man lent ₹ 60,000, partly at 5% and the rest at 4% simple interest. If the total annual interest is ₹ 2560, the money lent at 4% was a) 40,000 b) 44,000 c) 55,000 d) 35,000	K2	CO1
	2	A sum of money at some rate of simple interest amounts to ₹ 2,900 in 8 years and to ₹ 3,000 in 10 years. The rate of interest per annum is a) 4% b) 5% c) 3% d) 2%	K2	CO1
2	3	What is the sum of squares of deviations from Arithmetic mean? a) Zero b) Maximum c) Minimum d) 100	K1	CO2
	4	Sum of absolute deviations about median is a) Zero b) the greatest c) the least d) minimum	K2	CO2
3	5	Recall the range of the coefficient of Correlation. a) has no limits b) can be less than 1 c) can be more than 1 d) varies between +1 or - 1	K1	CO3
	6	When the two regression lines coincide, then the value of 'r' is a) 0 b) -1 c) 1 d) 0.5	K2	CO3
4	7	Variation of business cycle is an example of _____. a) Cyclical variations b) Seasonal variations c) Secular trend d) Irregular variations	K1	CO4
	8	Identify the most widely used method of measuring seasonal variations. a) Ratio to Moving Average Method b) Ratio to Trend Method c) the link relative method d) step deviation method	K2	CO4
5	9	Mention the function to calculate the Range of data in Excel is a) RANGE S() b) Range () c) RANGE P() d) MAX()-MIN()	K1	CO5
	10	Recall _____ Excel function that is used to find the mean of a number of items. a) = MEAN () b) =AVERAGE () c) =SUM() d) =FIND AVERAGE()	K2	CO5

SECTION - B (35 Marks)

Answer ALL questions

ALL questions carry EQUAL Marks

(5 × 7 = 35)

ALL questions carry equal marks

Module No.	Question No.	Question	K Level	CO																				
1	11.a.	Find the simple interest on Rs.5000 at 10%for 3 years .find also the total amount.	K2	CO1																				
	(OR)																							
	11.b.	A loan is repaid in 4 annual instalments of Rs.200 each if the rate of interest is 10%p.a find the amount of the loan																						
2	12.a.	Interpret median from the following data:	K2	CO2																				
		<table border="1"> <tr> <td>Mid values</td> <td>11-5</td> <td>12-5</td> <td>13-5</td> <td>14-5</td> <td>15-5</td> <td>16-5</td> <td>17-5</td> <td>18-5</td> <td>19-5</td> </tr> <tr> <td>Frequency</td> <td>6</td> <td>25</td> <td>48</td> <td>72</td> <td>116</td> <td>60</td> <td>38</td> <td>22</td> <td>3</td> </tr> </table>			Mid values	11-5	12-5	13-5	14-5	15-5	16-5	17-5	18-5	19-5	Frequency	6	25	48	72	116	60	38	22	3
		Mid values			11-5	12-5	13-5	14-5	15-5	16-5	17-5	18-5	19-5											
	Frequency	6			25	48	72	116	60	38	22	3												
	(OR)																							
12.b.	Compute arithmetic mean for the following data.																							
	<table border="1"> <tr> <td>Marks</td> <td>0-10</td> <td>10-20</td> <td>20-30</td> <td>30-40</td> <td>40-50</td> <td>50-60</td> </tr> <tr> <td>No.of .students</td> <td>5</td> <td>10</td> <td>25</td> <td>30</td> <td>20</td> <td>10</td> </tr> </table>	Marks	0-10	10-20	20-30	30-40	40-50	50-60	No.of .students	5	10	25	30	20	10									
Marks	0-10	10-20	20-30	30-40	40-50	50-60																		
No.of .students	5	10	25	30	20	10																		
Cont...																								

Cont...

3	13.a.	Compute Rank Correlation for the following:						K4	CO3		
	Marks in Maths	85	60	73	40	90					
	Marks in Statistics	93	75	65	50	80					
	(OR)										
	13.b.	Obtain the lines of regression									
		X	1	2	3	4	5	6	7		
		Y	9	8	10	12	11	13	14		
		Obtain an estimate of Y should correspond to the average $X=6.2$									
4	14.a.	Analyse the seasonal indices from the following data using the average Method.								K3	CO4
		year	1 st Quarter	2 nd Quarter	3 rd Quarter	4 th Quarter					
		2018	72	68	80	70					
		2019	76	70	82	74					
		2020	74	66	84	80					
		2021	76	74	84	78					
		2022	78	74	86	82					
		(OR)									
	14.b.	Construct four yearly moving averages, calculate the trend values									
		Year	Production	Year	Production						
		2002	464	2007	540						
		2003	515	2008	557						
		2004	518	2009	571						
		2005	467	2010	586						
		2006	502	2011	612						
5	15.a.	Explain data analysis toolpak in descriptive statistics.								K3	CO5
	(OR)										
	15.b.	Explain the functions of used to calculate Bivariate data.									

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	A sum of Rs.50,440 is borrowed to be paid back in three yearly equal instalments.what is the annual instalment if the rate of interest is 5% per annum compounded yearly?	K3	CO1														
2	17	Analyze (i) Mean (ii) Median (iii) Mode <table><tr><td>Marks below</td><td>10</td><td>20</td><td>30</td><td>40</td><td>50</td></tr><tr><td>No.of.students</td><td>3</td><td>8</td><td>17</td><td>20</td><td>22</td></tr></table>	Marks below	10	20	30	40	50	No.of.students	3	8	17	20	22	K4	CO2		
Marks below	10	20	30	40	50													
No.of.students	3	8	17	20	22													
3	18	Obtain the two regression equations for the given data. <table><tr><td>X</td><td>6</td><td>2</td><td>10</td><td>4</td><td>8</td></tr><tr><td>Y</td><td>9</td><td>11</td><td>5</td><td>8</td><td>7</td></tr></table>	X	6	2	10	4	8	Y	9	11	5	8	7	K4	CO3		
X	6	2	10	4	8													
Y	9	11	5	8	7													
4	19	Fit a straight line trend by the method of least squares. <table><tr><td>Year</td><td>2019</td><td>2020</td><td>2021</td><td>2022</td><td>2023</td><td>2024</td></tr><tr><td>Production</td><td>24</td><td>25</td><td>29</td><td>26</td><td>22</td><td>24</td></tr></table> Estimate the likely production for the year 2027.	Year	2019	2020	2021	2022	2023	2024	Production	24	25	29	26	22	24	K3	CO4
Year	2019	2020	2021	2022	2023	2024												
Production	24	25	29	26	22	24												
5	20	Describe the various methods of dispersion using Excel functions.	K3	CO5														

Z-Z-Z

END