



PRESIDENCY UNIVERSITY

BENGALURU

Roll No.														
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Mid - Term Examinations – JAN-FEB 2025

Date: 06 – 02- 2025

Time: 02:00 pm – 03:30 pm

School: SOM-PG	Program: MBA	
Course Code : MBA1007	Course Name : Business Statistics	
Semester: I	Max Marks: 50	Weightage: 25%

CO - Levels	C01	C02	C03	C04	C05
Marks	26	24			

Instructions:

- (i) Read all questions carefully and answer accordingly.
- (ii) Do not write anything on the question paper other than roll number.

Part- A

Answer ALL the Questions. Each question carries 3marks.

5Q x 3M=15 Marks

1	Mention any three merits of median.	3 Marks	L1	C01
2	Write the formula for computing first quartile for ungrouped data.	3 Marks	L1	C01
3	What is positive correlation? Give an example	3 Marks	L1	C02
4	Define the terms: a. intercept b. regression coefficient	3 Marks	L1	C02
5	Write the formula for computing standard deviation for ungrouped data.	3 Marks	L1	C02

Part- B

Answer all the Questions

2Qx10M = 20 Marks

6.		<p>The following data represent the afternoon high temperatures for 15 construction days during a year in St. Louis. Compute mean and median</p> <p style="text-align: center;">42 70 64 47 66 69 73 38 48</p> <p style="text-align: center;">25 55 85 10 24 40</p>	10 Mark	L1	CO1
Or					
7.		<p>The cost of consumer purchases such as single-family housing, gasoline, Internet services, tax preparation, and hospitalization were provided in <i>The Wall-Street Journal</i> (January 2, 2023). Sample data typical of the cost of tax-return preparation by services such as H&R Block are shown below. Compute Q1 and Q3</p> <p style="text-align: center;">120 230 110 115 160 130 150 105 195 155 105 360</p> <p style="text-align: center;">120 120 140</p>	10 Mark	L	CO

8.		<p>The following data represent the number of appointments made per 15-minute interval by telephone solicitation for a lawn-care company. Compute the standard deviation</p> <table><tr><td>Number of Appointments</td><td>Frequency of Occurrence</td></tr><tr><td>0-1</td><td>31</td></tr><tr><td>1-2</td><td>57</td></tr><tr><td>2-3</td><td>26</td></tr><tr><td>3-4</td><td>14</td></tr><tr><td>4-5</td><td>6</td></tr><tr><td>5-6</td><td>3</td></tr></table>	Number of Appointments	Frequency of Occurrence	0-1	31	1-2	57	2-3	26	3-4	14	4-5	6	5-6	3	10 Mark	L3	CO1				
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Or																							
9.		<p>Students in an introductory marketing course were given a written final examination as well as a project to complete as part of their final grade. For a random sample of 8 students, the scores on both the exam and the project are as follows:</p> <table><tr><td>Exam</td><td>81</td><td>62</td><td>74</td><td>78</td><td>93</td><td>69</td><td>72</td><td>83</td></tr><tr><td>Project</td><td>76</td><td>71</td><td>69</td><td>76</td><td>87</td><td>62</td><td>80</td><td>75</td></tr></table> <p>Compute Karl Pearson correlation coefficient</p>	Exam	81	62	74	78	93	69	72	83	Project	76	71	69	76	87	62	80	75	10 Mark	L3	CO2
Exam	81	62	74	78	93	69	72	83															
Project	76	71	69	76	87	62	80	75															

Part- C

Answer the following questions

1Qx15M=15Marks

10.	<p>The marketing manager of a large supermarket chain would like to use shelf space to predict the sales of pet food. A random sample of 12 equal-sized stores is selected, with the following results</p> <table><tr><th colspan="3">Store Shelf Space (X) (Feet) Weekly Sales (Y) (\$)</th></tr><tr><td>1</td><td>5</td><td>160</td></tr><tr><td>2</td><td>5</td><td>220</td></tr><tr><td>3</td><td>5</td><td>140</td></tr><tr><td>4</td><td>10</td><td>190</td></tr><tr><td>5</td><td>10</td><td>240</td></tr><tr><td>6</td><td>10</td><td>260</td></tr><tr><td>7</td><td>15</td><td>230</td></tr><tr><td>8</td><td>15</td><td>270</td></tr><tr><td>9</td><td>15</td><td>280</td></tr><tr><td>10</td><td>20</td><td>260</td></tr><tr><td>11</td><td>20</td><td>290</td></tr><tr><td>12</td><td>20</td><td>310</td></tr></table> <p>Determine the regression equation to predict the weekly sales of pet food for stores with 8 feet of shelf space for pet food</p>	Store Shelf Space (X) (Feet) Weekly Sales (Y) (\$)			1	5	160	2	5	220	3	5	140	4	10	190	5	10	240	6	10	260	7	15	230	8	15	270	9	15	280	10	20	260	11	20	290	12	20	310	15 Mark	L3	CO2
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***** BEST WISHES *****