

<b>QP Code:D132529</b>		<b>Total Pages:2</b>		<b>Name:</b>							
				<b>Register No.</b>							
<b>FIRST SEMESTER UG DEGREE EXAMINATION, NOVEMBER 2025</b>											
<b>(CUFYUGP)</b>											
<b>COM1MN109/COP1MN109 Essential Statistics for Business Analytics</b>											
<b>2024 Admission onwards</b>											
<b>Maximum Time :2 Hours</b>					<b>Maximum Marks :70</b>						
<b>Answer should be written in English</b>											
<b>Section A</b>											
<b>All Question can be answered. Each Question carries 3 marks</b>											
1	What is a moving average method?										
2	Define Chi-square test.										
3	What is time series analysis?										
4	Define regression coefficient.										
5	What is sampling distribution?										
6	Define probabilistic sampling.										
7	What is bivariate data?										
8	What is meant by ANOVA?										
9	What is an alternate hypothesis?										
10	State any two uses of correlation analysis.								<b>(Ceiling: 24 Marks)</b>		
<b>Section B</b>											
<b>All Question can be answered. Each Question carries 6 marks</b>											
11	Explain the process of estimating sampling errors and confidence intervals.										
12	Explain the types of correlation with suitable examples.										
13	Discuss the assumptions and applications of Chi-square test										
14	Obtain the regression equation of Y on X from the following.										
	<b>X</b>	36	23	27	28	28	29	30	31	33	35
	<b>Y</b>	29	18	20	22	27	21	29	27	29	28

15	A sample analysis of an examination result of 200 students was made. It was found that 46 students had failed, 68 secured III class, 62 II Class and the rest were placed in I class. Are this figure commensurate with the general examination results which is in the ratio of 2:3:3:2 for various categories respectively?																						
16	Explain the concept and importance of sampling theory																						
17	Obtain straight line trend by the method of least square <table border="1" style="margin-left: auto; margin-right: auto;"> <tr> <td>Year</td> <td>2000</td> <td>2001</td> <td>2002</td> <td>2003</td> <td>2004</td> <td>2005</td> <td>2006</td> <td>2007</td> </tr> <tr> <td>Values</td> <td>16</td> <td>14</td> <td>20</td> <td>18</td> <td>12</td> <td>23</td> <td>28</td> <td>25</td> </tr> </table>	Year	2000	2001	2002	2003	2004	2005	2006	2007	Values	16	14	20	18	12	23	28	25				
Year	2000	2001	2002	2003	2004	2005	2006	2007															
Values	16	14	20	18	12	23	28	25															
18	Explain the meaning and properties of regression line.																						
<b>(Ceiling: 36 Marks)</b>																							
<b>Section C</b>																							
<b>Answer any ONE question carries 10 marks</b>																							
19	Explain in detail the various steps involved in hypothesis testing.																						
20	Compute Spearman's Rank correlation from the following. <table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th>X</th> <th>Y</th> </tr> </thead> <tbody> <tr><td>17</td><td>36</td></tr> <tr><td>13</td><td>46</td></tr> <tr><td>15</td><td>35</td></tr> <tr><td>16</td><td>24</td></tr> <tr><td>6</td><td>12</td></tr> <tr><td>11</td><td>18</td></tr> <tr><td>14</td><td>27</td></tr> <tr><td>9</td><td>22</td></tr> <tr><td>7</td><td>2</td></tr> <tr><td>12</td><td>8</td></tr> </tbody> </table>	X	Y	17	36	13	46	15	35	16	24	6	12	11	18	14	27	9	22	7	2	12	8
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<b>(1x10=10 Marks)</b>																							