



ALLAMA IQBAL OPEN UNIVERSITY

Semester Terminal Exam Autumn 2020

Program /level:	BS / ADC	Maximum Marks	100
Title /Course Code	Statistics for Management (5412)	Pass marks	50

Instructions for Exams:

1. Attempt All Questions.
2. Write answers in your own words and avoid copying from an internet source or any book.
3. Be precise, avoid unnecessary details, answer to each question must be between 600-800 words.
4. Students are advised to upload their answer sheets/solutions on LMS portal as soon as they complete their answers and not to wait for 8:30 PM.
5. Submissions after due date & time will not be entertained. Attach undertaking with each course code which were allowed to attempt in Urdu.
6. If plagiarism found, Student may be declared fail.

Q. No.	Questions	Marks																						
Q.No.1	(a) What are the different methods employed in the collection of data for statistical enquiries? In what type of inquiry should each one of them be used? (b) Describe briefly the different types of diagrams generally used for presenting statistical data. State merits and demerits of any three of them. (c) Calculate the mean and the median from the given data: <table border="1"><tr><td>X</td><td>1</td><td>2</td><td>3</td><td>4</td><td>5</td><td>6</td><td>7</td><td>8</td><td>9</td><td>10</td></tr><tr><td>f</td><td>26</td><td>113</td><td>120</td><td>95</td><td>60</td><td>42</td><td>21</td><td>14</td><td>5</td><td>4</td></tr></table>	X	1	2	3	4	5	6	7	8	9	10	f	26	113	120	95	60	42	21	14	5	4	(11+10+12) 33
X	1	2	3	4	5	6	7	8	9	10														
f	26	113	120	95	60	42	21	14	5	4														
Q.No.2	(a) Calculate mean deviation and standard deviation from the given data: <table border="1"><tr><td>Classes</td><td>0-9</td><td>10-19</td><td>20-29</td><td>30-39</td><td>40-49</td><td>50-59</td><td>60-69</td><td>70-79</td></tr><tr><td>f</td><td>2</td><td>3</td><td>8</td><td>24</td><td>27</td><td>40</td><td>11</td><td>5</td></tr></table> (b) Explain the concept of an index number. What is the procedure followed in the preparation of an index number? (c) What is a linear regression model? Explain the assumptions underlying the linear regression model.	Classes	0-9	10-19	20-29	30-39	40-49	50-59	60-69	70-79	f	2	3	8	24	27	40	11	5	(12+12+10) 34				
Classes	0-9	10-19	20-29	30-39	40-49	50-59	60-69	70-79																
f	2	3	8	24	27	40	11	5																
Q.No.3	(a) What do you understand by the term Correlation? Write down the properties of correlation coefficient. (b) Describe the general procedure for testing a hypothesis about a population parameter. (c) A sample of size 40 from a non-normal population yielded the sample mean $\bar{x} = 71$ and $S^2 = 200$. Test $H_0 : \mu = 72$ against $H_1 : \mu \neq 72$ at $\alpha = 1\%$	(11+11+11) 33																						