

INDIRA UNIVERSITY, PUNE

SET-2

SCHOOL OF COMMERCE & ECONOMICS- BSC ECO

Backlog Examination (2025 Pattern) April/ May – 2026 - Semester – I

Subject Name: Elementary Statistics
Subject Code: 25ECO109T

Max. Marks: 25
Time: 1.30 Hours

Instructions

- All questions are compulsory.
- Figures to the right indicate full marks.
- Use of scientific calculator (Non-Programmable) is allowed.

CO #	Cognitive Ability	Course Outcome
CO1	Remember	Recall and define essential statistical concepts, data classifications, summary measures, and the role of statistics in economics across all topics.
CO2	Understand	Describe, explain, and interpret different statistical methods, including data visualization, central tendency, dispersion, correlation, and regression, in relation to economic and social issues.
CO3	Apply	Apply appropriate statistical tools—such as tables, graphs, dispersion measures, and linear regression—to real-world datasets and economics-related problems.
CO4	Analyze	Analyze structured and unstructured data by comparing different statistical representations and drawing conclusions using regression, variation, and distribution patterns.
CO5	Evaluate	Evaluate statistical findings for accuracy and relevance by comparing outcomes from different methods, checking consistency, and interpreting index numbers.
CO6	Create	Construct, organize, and present a complete statistical report by integrating classification, diagrams, measures, and analytical techniques using real or simulated data.

Q.1	Attempt all of the following: a) Secondary data is... i) already collected by some other agency ii) a processed data iii) a finished data iv) all the above b) Which limits are excluded in case of exclusive type of class intervals? i) lower limits (ii) upper limits (iii) either (i) or (ii) (iv) both (i) and (ii) c) Which diagram is used to study correlation between two variables? i) Bar diagram ii) pie diagram iii) scatter diagram iv) histogram	(5 Marks)	CO1
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	d) The Lorenz curve is used to study... i) Correlation between two variables ii) Relationship between demand and supply iii) Dispersion of income or wealth iv) Time series data e) The coefficient of variation is useful for i) Comparing the averages of two series ii) Comparing the consistency or stability of two series iii) Measuring only the range iv) Measuring correlation																																						
Q.2	Solve any ONE from the following: (10 Marks) A. Calculate mean, median and mode for the following frequency distribution. <table border="1"><tr><td>Classes</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><td>60-70</td></tr><tr><td>Frequency</td><td>5</td><td>8</td><td>12</td><td>15</td><td>10</td><td>6</td><td>4</td></tr></table> B. The following table shows the distribution of marks obtained by 100 students in a test: (i) Construct a less than and more than ogive curve. (ii) Find the median of the distribution using graph. <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><td>60-70</td><td>70-80</td></tr><tr><td>Frequency</td><td>5</td><td>12</td><td>15</td><td>18</td><td>22</td><td>16</td><td>9</td><td>3</td></tr></table>	Classes	0-10	10-20	20-30	30-40	40-50	50-60	60-70	Frequency	5	8	12	15	10	6	4	Marks	0-10	10-20	20-30	30-40	40-50	50-60	60-70	70-80	Frequency	5	12	15	18	22	16	9	3	CO3			
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Q.3	Solve any ONE from the following: (10 Marks) A. Calculate Spearman's Rank Correlation Coefficient between X and Y and interpret the result. <table border="1"><tr><td>X</td><td>86</td><td>97</td><td>75</td><td>90</td><td>89</td><td>71</td><td>78</td><td>93</td><td>84</td><td>77</td></tr><tr><td>Y</td><td>30</td><td>42</td><td>15</td><td>35</td><td>25</td><td>10</td><td>20</td><td>40</td><td>25</td><td>20</td></tr></table> B. Compute price index numbers for the year 2002 with 2001 as base year using (i) weighted arithmetic mean of price relatives (ii) weighted aggregate of price. <table border="1"><tr><td>Commodity</td><td>A</td><td>B</td><td>C</td><td>D</td></tr><tr><td>Price in 2001</td><td>120</td><td>160</td><td>150</td><td>130</td></tr><tr><td>Price in 2002</td><td>144</td><td>176</td><td>195</td><td>182</td></tr></table>	X	86	97	75	90	89	71	78	93	84	77	Y	30	42	15	35	25	10	20	40	25	20	Commodity	A	B	C	D	Price in 2001	120	160	150	130	Price in 2002	144	176	195	182	CO4
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