

**2024**

( FYUGP )

( 3rd Semester )

ECONOMICS

Paper Code : EC3.SEC-2

( **Methods of Data Analyses** )

*Full Marks : 37.5*

*Pass Marks : 40%*

*Time: 2 Hours*

*The figures in the margin indicate full marks  
for the questions.*

**PART : A – OBJECTIVE**

I. Choose the correct answer from the given options: (½x15=7½)

1. Which of the following is not a two-dimensional diagram?

- |                             |            |
|-----------------------------|------------|
| a) Rectangle                | b) Circles |
| c) Sub-divided bar diagrams | d) Squares |

2. An Ogive is also known as

- a) Line graph
- b) Cumulative frequency curve
- c) Utility curve
- d) None of the above

( Turn Over )

( 2 )

3. Multiple correlation implies the study between  
a) Two variables                      b) Three variables  
c) More than three variables      d) Both (b) and (c)
4. The coefficient of correlation lies between  
a) -1 and +1                          b) -2 and +2  
c) -0 and +1                          d) None of the above
5. Degree of coefficient is said to be low when it lies between  
a) 0.75 and 1                          b) 0 and 0.25  
c) 0.25 and 0.75                      d) None of the above
6. In regression analysis, deviations are taken from the assumed mean when  
a) Mean is zero                          b) Mean is in fractions  
c) Mean is undefined                  d) Mean is more than one
7. Regression coefficients are independent of  
a) Change of origin                      b) Change of scale  
c) Both (a) and (b)                      d) None of the above
8. In the regression equation of Y on X, 'b' represents:  
a) Slope of the line                      b) Independent variable  
c) Dependent variable                  d) Y-intercept
9. Rank correlation of coefficient was developed by  
a) Karl Pearson                          b) Morris Hamburg  
c) A.M Tuttle                              d) Charles Edward Spearman
10. The regression coefficients  $b_{xy}$  and  $b_{yx}$  are  
a) Symmetric                              b) Not symmetric  
c) Zero                                        d) None of the above

( 5 )

3. a) Explain the different types of correlation. (5)

Or

- b) Estimate Spearman's rank correlation from the following data:

Marks in Maths (X)	45	45	60	38	50
Marks in Statistics (Y)	60	61	58	48	48

(5)

4. a) Explain the difference between correlation and regression. (5)

Or

- b) Explain the properties of regression coefficients. (5)

5. a) From the following data, obtain the two regression equations: (5)

X	6	2	10	4	8
Y	9	11	5	8	7

Or

- b) Explain the uses of regression analysis. (5)

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( Continued )

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11. If two variables vary in the same direction, it is called  
a) Positive correlation                      b) Negative correlation  
c) Partial correlation                        d) Linear correlation
12. Pie diagram is an example of  
a) One dimensional diagram  
b) Two-dimensional diagram  
c) Three-dimensional diagram  
d) All of the above
13. Which of the following is not a method of studying correlation?  
a) Scatter diagram                            b) Pearsonian coefficient  
c) Rank correlation                           d) Pictograph
14. If one regression coefficient is more than one, the other must be  
a) Zero    b) Lesser than one  
c) Equal to one                                   d) Less than zero
15. Bivariate frequency distribution involves  
a) One variable                                   b) Two variable  
c) More than two variable                   d) None of the above

II. Write short notes on any five of the following: (1x5=5)

1. What is a frequency polygon?
2. Define a pictogram.
3. What is regression analysis?
4. Define correlation.
5. What is a scatter diagram?
6. State one similarity between correlation and regression.
7. What is line frequency?

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**PART : B – DESCRIPTIVE**

Answer **five** questions taking one from each part.

1. a) Differentiate between univariate and bivariate frequency distribution. Construct a bivariate frequency distribution table from the given data: (2+3=5)

Marks in Economics	18	32	12	2	36	14	10	22	4	24
Marks in Statistics	10	34	12	7	38	22	16	28	2	36

Or

- b) Explain the different types of one-dimensional diagram. (5)

2. a) Draw a less than and more than ogives from the given data: (5)

Marks	No. of Students
10 - 20	4
20 - 30	6
30 - 40	10
40 - 50	20
50 - 60	18
60 - 70	2

Or

- b) The following table shows assistance sanctioned by the Industrial finance corporation during the year 2007-08. Construct a pie diagram. (5)

Sector	₹ (in Crores)
Corporate Sector	10
Public Sector	20
Joint Sector	10
Private Sector	60

( Turn Over )

( Continued )