

Tilak Maharashtra University
Bachelor of Business Administration (Distance)
(Semester - II) - Internal Evaluation
Business Statistics

Marks : 80

Code : 71214

Note:

- ❖ The Paper Consist of two sections I & II
- ❖ Section I & II are Compulsory Section I

Section I

Q.1

15

A) Company paid bonus to its employees as under

Monthly Salary (Rs.)	Bonus Paid (Rs.)
100-120	500
120-140	600
140-160	700
160-180	800
180-200	900
200-220	1000
220 & Over	1100

The actual salaries of the employees were as given below (Rs.)

205, 190, 195, 218, 187, 168, 250, 168, 190, 168, 170, 175, 178, 175, 150, 125, 148, 165, 156, 145, 125, 110, 162, 130, 150, 184,

Make a frequency Distribution table.

Find Out :- 1) Total bonus paid

- 2) The average salary paid per employee
- 3) Median value salary of employee
- 4) Variance of the given data
- 5) Standard Deviation of given data

OR

B) You are given the weekly wages of 30 workers working in a household factory—

Wages (Rs.)	
350.40	592.60 375.80 415.80 380.20
469.20	462.70 392.40 517.90 420.00
578.30	572.50 492.40 475.30 536.40
633.20	708.50 576.50 727.90 375.80
517.20	420.70 608.20 493.40 479.20
460.20	594.50 537.60 625.20 588.60

Taking first class 300- 400. Make frequency Distribution table with given Data. Calculate Karl Pearson's coefficient of skewness and interpret you data.

Q.2

15

A) From the data given below-

Marks in Economics 25 28 35 32 31 36 29 38 34 32

Marks in Statistics 43 46 49 41 36 32 31 30 33 39

Find :- 1) The two regression equations

Y on X and X and Y

2) The coefficient of correlation between marks in Economics & Statistics

3) The most likely marks in statistics when the marks in Economics are 30.

OR

B) The following data relate to how the Rupees comes and goes. Draw proper diagram of given data

Rupees comes	Paise	Repees goes	Paise
1) Excise	22	1) Central Plan	25
2) Customs	18	2) Interest	15
3) Internal borrowing	18	3) Defence	13
4) Non- tax revenue	14	4) Shares of taxes	14
5) Other capital receipts	7	5) Other non plan expenditure	12
6) Corporation tax	6	6) State & UT Plan assistance	12
7) Income- tax	3	7) Subsidies	5
8) External assistance	3	8) Non- plan assistance	4
9) Other taxes	2		

Q. 3

15

A) Calculate the Laspeyre's , Paasche's and Fisher's Index numbers for prices in the year 2008 with 2003 as base year from the following data.

Commodity	Base Year (2003)		Current Year (2008)	
	Price (Po)	Quantity (Qo)	Price (P1)	Quantity (Q1)
1) Rice	4	15	6	20
2) Wheat	3	40	5	35
3) Jawar	5	20	5	25
4) Pulses	6	10	8	10

OR

B) The following data given calculate

a) Mean Deviation about Mean

b) Mean Deviation about Median

<u>Class</u>	<u>Frequency</u>
0- 10	7
10- 20	12
20- 30	18
30- 40	25
40- 50	16
50- 60	14
60- 70	8

Q. 4 Write Short Notes (Any three out of five)

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- 1) Sampling
- 2) Measures of Central Tendency
- 3) Measures of Dispersion
- 4) Graphical Representation of Data
- 5) Correlation Coefficient

Section I

Q. 5 Choose the most appropriate option given below

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- 1) Two dice are thrown simultaneously and points of dice are multiplied together. Then probability that product is 4 is =
 - a) $\frac{1}{12}$
 - b) $\frac{4}{36}$
 - c) $\frac{1}{36}$
 - d) $\frac{4}{36}$
- 2) Spearman's Rank Correlation coefficient is used when data is given =
 - a) Quantitative
 - b) Qualitative
 - c) Sample data
 - d) Stratified data.
- 3) Distribution is symmetrical, skewness is zero, $Skp = 0$ when
 - a) Mode > Mean
 - b) Mode < Mean
 - c) Mode = Mean
 - d) Mode = Mean
- 4) M.D \bar{x} means
 - a) Mean Deviation about Mean
 - b) Mean Deviation about Median
 - c) Mean Deviation about Mode
 - d) Multiple Deviation
- 5) Q_1 is called as
 - a) Lower Quartile
 - b) Upper Quartile
 - c) Middle Quartile
 - d) Next Quartile

- 6) Percentiles divides the total data in
- Ten equal parts
 - Hundred equal parts
 - Four equal parts
 - Two equal parts
- 7) When data is given in percentage form then the probable diagrammatic representation of given data is
- Histogram
 - Frequency Polygon
 - Pie Chart
 - Ogive curves
- 8) Standard Error of coefficient of correlation is calculated by the formula :
- $S.E. = \frac{1 - r^2}{N}$
 - $S.E. = \frac{1 - r^2}{N}$
 - $S.E. = \frac{1 - r}{N}$
 - $S.E. = \frac{N}{1 - r^2}$
- 9) $Y = a + byx X$ is called.....
- Linear equation
 - Regression equation
 - Equation of line of regression Y on X
 - Equation of line of regression X on Y
- 10) Two or more events are called equality likely if they have
- the same probability of occurrence
 - Different probability of occurrence
 - probability equal to one
 - probability equal to zero
- 11) ${}^n C_r = \dots\dots\dots$
- $\frac{n!}{(n-r)! r!}$
 - $\frac{n!}{r!}$
 - $\frac{n!}{(n-r)!}$
 - $\frac{(n-n)!}{r!}$
- 12) Index Numbers are called
- Economic Barometers
 - Price Barometers
 - Rupees Index
 - Degree of change of correspondence
- 13) Mutual or joint relation between two variables
- Standard Deviation
 - Index Number
 - Correlation
 - Variance

