

STATISTICS FOR BUSINESS

K1 LEVELS

1. Two or More bars are constructed in which bar ?
a) Percentage bar b) Subdivided bar c) Multiple bar d) Simple bar
2. Find the AM of the following data 4,5,6,7,8,9,10 ?
a) 49 b) 10 c) 7 d) 0.7
3. Find the Range 10,20,30,40,50 ?
a) 30 b) 40 c) 0.67 d) 5.5
4. How many methods of Studying Variation are there ?
a) 4 b) 3 c) 2 d) 1
5. A list of 5 pulse rate is: 70, 64, 80, 74, 92. What is the median for this list?
a) 74 b) 76 c) 77 d) 80
6. How many components of time series are there ?
a) 4 b) 3 c) 2 d) 1
7. Who is the Author of “OR” ?
a) A.L.Bowley b) H.M.Wagner c) Baye's d) Skewness
8. How the seasonal variations are usually measured?
a) Daily b) Weekly c) Monthly d) Hourly
9. How many Measurements of Trend are there?
a) 1 b) 2 c) 3 d) 4
10. How many variables are there in Regression?
a) Five b) Three c) More d) Two

11. Find the range for given data: 108, 107, 105, 106, 104, 103, 101, 104

- a) 5 b) 7 c) 8 d) 6

12. What is the first stage in statistics?

- a) Collect data b) Analyze data c) Identify the group of people
to be studied d) Organize data

13. Find the mean for the following set of integers: 8, 11, -6, 22, and -3.

- a) 5 b) 7.5 c) 6.4 d) 5.5

14. Which of the following measures can be used to present an
data?

- a) Median, Range b) Alpha, mean and mode c) Standard deviation, range
and mean d) Mean, median and mode

15. The median of 10, 12, 14, 16 and 18 will be

- a)12 b) 16 c) 15 d) 14

16. Which of the following is the tool of measures of the variation of items

- a)Mode b) Mean c) Hypothesis d) Dispersion

17. Coefficient of correlation will be always

- a) More than 0 b) More than -1 c) Less than -1 d) Between -1 and +1

18. If the two regression coefficient are 0.8 and 0.2, then the value of
coefficient of correlation is

- a)+0.16 b) -0.40 c) -0.16 d) +0.40

19. Graphical method can be applied to solve a LPP when there are
only _____ variable.

a) One b) More than One c) Two d) Three

20. How many types of classification are there?

a) 1 b) 2 c) 3 d) 4

K2 QUESTIONS

1. Define statistics.

2. Formula for Mean, Median and Mode

3. Formula for Range, Quartile Deviation?

4. List the types of Classification

5. Formula for standard deviation.

6. Formula for Measures of Skewers?

7. Formula for Correlation of Karl Pearson's?

8. Formula for X on Y?

9. Formula for Y on X?

10. Formula for Repeated Rank Correlation?

11. Find mean, median and mode for the set of numbers.

2, 3, 0, 1, 2

12. List out the components of Time Series.

13. Define Operation Research.

14. Expand LPP.

15. Write down the regression equation.

16. Define Time Series.

17. List out the various types of Data.
18. Formula for Coefficient of Skewness
19. Expand QD and CV.
20. Formula for Mean deviation.

K3 QUESTIONS

1. Schedule the Scope of Statistics?
2. Examine the Objectives of Classification?
3. Differences between Classification and Tabulation?
4. Differences between Primary and Secondary Data?
5. Discover the scope of operation Research.
6. Sketch the scientific method in Operation Research?
7. Calculate the QD and CD for the following?
10,15,20,25,30,35,40,45,50,55,60
8. Find the Mean, Median and Mode?
12 16 12 6 18 2 4
9. Discover the Components of Time Series?
10. Examine the Utility of Time Series Analysis?
11. Apply the Scope of Operation Research?
12. Organize the characteristics of classification?
13. Discover the general rules to be followed in tabulation?

14. Construct a frequency distribution table for the numbers given

below, using class interval 21-30, 31-

40, etc 75, 65, 57, 26, 33, 44, 58, 67, 75, 78, 43, 41, 31, 21, 32, 40, 62, 54, 69, 48, 47, 51, 38, 39, 43, 61, 63, 68, 53

15. Find the mean and median of the following 11, 4, 9, 7, 10, 5, 6

16. Calculate Range and Q.D of the following observation:

20, 25, 29, 30, 35, 39, 41, 48, 51, 60 and 70

17. Calculate the standard deviation for the following?

X= 2, 4, 8, 6, 10, 12

18. Find the mean deviation from mean of the data

45 55 63 76 67 84 75 48 62 65

19. Prepare a blank table to show the exports from three companies

X, Y and Z to

five countries Iran, Iraq, Saudi Arabia, Dubai and Muscat in each of the years

2001, 2002 and 2003.

20. Draw an ogive for the following data.

Weight	40-45	45-50	50-55	55-60	60-65	65-70	70-75	75-80
No of Students	5	17	22	45	51	31	20	9

21. Use the following data calculate the arithmetic mean.

Class Intervals	15-25	25-35	35-45	45-55	55-65	65-75	75-85
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Frequency	6	11	7	4	4	2	1
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22. Compute Mean Deviation and Coefficient of mean deviation for the following data

C.I	0-10	10-20	20-30	30-40	40-50	50-60	60-70	70-80
Frequency	5	8	12	15	20	14	12	6

23. Calculate the Spearman's Rank Correlation Coefficient from the following data.

X	2	1	4	3	5	7	6
Y	1	3	2	4	5	6	7

24. Construct two regression equations for the following data.

A	23	43	53	63	73	83
B	5	6	7	8	9	10

25. Calculate 5 year Moving average and its center.

Year	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990
Value	123	140	110	98	104	133	95	105	150	135

26. Solve a straight line trend for the following series, Estimate the value for 2017.

Year	2010	2011	2012	2013	2014	2015	2016
Sales	125	128	133	135	140	141	143

27. Calculate the simple Bar diagram?

Eyes Colour	Number of Students
Blue	60
Green	120
Brown	150
Black	100
Grey	80

28. Find the number of hours spent by in different activities in a day is given below draw the Pie diagram?

Activity	Number of Hours
Sleep	8
School	7
Play	2
Home work	4
Others	3

Total	24
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29. Calculate the Median for the following data ?

Wages	Number of Persons
170-180	52
180-190	68
190-200	85
200-210	92
210-220	100
220-230	95
230-240	70
240-250	28

30. Sketch the Lorenz Curve?

Income	Frequency
100	80
200	70
400	50
500	30
800	20

31. Calculate Karl Pearson's coefficient of skewness.

X	1	2	3	4	5	6	7
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Y	10	18	30	25	12	3	2
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32. Solve Bowley's coefficient of skewness.

X	0	1	2	3	4	5	6
Y	7	10	16	25	18	11	8

33. Find Karl Pearson's coefficient of skewness.

X	5	10	15	20	25	30	35
Y	2	8	22	34	16	10	8

34. Calculate Bowley's coefficient of skewness

X	Below 10	20	30	40	50	60	70	80	90	100
Y	5	9	17	29	45	60	70	78	83	85

35. Solve the coefficient of correlation between X and Y

X	1	3	4	5	7	8	10
Y	2	6	8	10	14	16	20

36. Apply the Rank correlation between the ranks given for X and Y (K3)

X	10	8	1	2	6	9	3	5	4	7
Y	6	10	5	4	3	1	2	9	8	7

37. Calculate the regression equation

(K3)

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

38. Calculate for drawing Pie Diagram?

(K3)

Stages of education	Total Expenditure
I. Primary	209
II. Secondary	88
III. Higher education	82
IV. OtherS	39

39. Use the following table, construct Lorenz Curve.

Incomes	Number of employees
0-5000	5
5000-10000	10
10000-20000	18
20000-40000	10
40000-50000	7

40. Use the following table, find the mean.

Class Interval	Frequency
0-10	27
10-20	10
20-30	7
30-40	5
40-50	4
50-60	2

K4 & K5 QUESTIONS

1. Set up the following LPP using Graphical Method

$$\text{Maximize } Z = 12x_1 + 16x_2$$

$$\text{Subject } 10x_1 + 20x_2 < 120$$

$$8x_1 + 8x_2 < 80, \quad X_1 \text{ and } X_2 > 0$$

2. Prepare Bowley's coefficient of skewness from the data

X	10-20	20-30	30-40	40-50	50-60	60-70	70-80
Y	358	2417	976	129	62	18	10

3. Explain the Measurement of Trend ?

4. Prepare Spearman's Repeat Rank Correlation

X	65	63	67	64	68	62	70	66	68	67	69	71
Y	68	66	68	65	69	66	68	65	71	67	68	70

5.Prepare the Regression equation of X onYand Yon X from data X when $Y=26$

X	10	12	13	17	18	20	24	30
Y	5	6	7	9	13	15	20	21

6. Explain the Characteristics of Operation Research ?

7.Summarise the Types of Diagrams?

8. Outline the Ogives for the following data.

Class Interval	Frequency
30-40	2
40-50	3
50-60	5
60-70	7
70-80	6
80-90	2

9. Calculate mean, median and mode of a group of students in a test is shown in the below table..

Marks	Frequency
10-20	4
20-30	12
30-40	40
40-50	41
50-60	27
60-70	13

70-80	9
80-90	4

10. Calculate Mean deviation and Coefficient for the following data.

Class interval	Frequency
0-10	5
10-20	10
20-30	15
30-40	20
40-50	25

11. Calculate Median and Mode from the following data using Table.

X	25	30	35	40	45	50	55
F	7	11	17	15	14	10	11

12. Calculate the standard deviation and coefficient of variation for the following data.

Class interval	Frequency
0-20	7
20-40	8
40-60	25

60-80	15
80-100	45

13.Set up the following data by percentage bar diagram.

Particulars	Factory A	Factory B
Selling Price	400	650
Quantity Sold	240	365
Wages	3500	5000
Materials	2100	3500
Miscellaneous	1400	2100

14.Draw a multiple bar diagram for the following data.

Year	Profit before tax	Profit after tax
1998	195	80
1999	200	87
2000	165	45
2001	140	32

15. Outline the Ogives for the following data.

Class interval	Frequency
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20-30	4
30-40	6
40-50	13
50-60	25
60-70	32
70-80	19
80-90	8
90-100	3

16. Classify a group of students in a test is shown in the below table. Calculate mean, median and mode.

Marks	Frequency
21-30	4
31-40	11
41-50	18
51-60	30
61-70	27
71-80	10

17. Revise the following distribution of marks scored by a class of 40 students, calculate the range, Q.D and Coefficient of variance.

Class intervals	No. of students
0-10	5
10-20	8
20-40	16
40-60	7
60-90	4

18. Calculate Mean deviation for the following data.

Class interval	Frequency
10-20	5
20-30	8
30-50	16
50-70	8
70-80	3

19. Combine the following LPP graphically.

$$\text{Maximize } Z = 12x_1 + 16x_2$$

$$\text{Subject to } 10x_1 + 20x_2 \leq 120$$

$$8x_1 + 8x_2 \leq 80$$

$$x_1 \text{ and } x_2 \geq 0$$

20. Organise the rank correlation coefficient for the following data

X	20	22	28	23	30	30	23	24
Y	28	24	24	25	26	27	32	30

21. Plan the Karl Pearson's Coefficient of the following data and interpret its value.

X	17	13	12	15	16	14	16	16	18	19
Y	94	73	59	80	93	85	66	79	77	91

22. Create Seasonal indices by 'Ratio to Moving average Method' from the following data.

Year	1 st Quarter	2 nd Quarter	3 rd Quarter	4 th Quarter
2005	75	60	54	59
2006	86	65	63	80
2007	90	72	66	85
2008	100	78	72	93

23. Summaries the Operation Research and the characteristics and limitations of OR techniques?

24. Plan data represent life of two models of refrigerator A and B

Life (in months)	Refrigerator	
	Model A	Model B

500-700	5	4
700-900	11	30
900-1100	26	12
1100-1300	10	8
1300-1500	8	6

25. Deign the Lorenz Curve and Procedure ?