

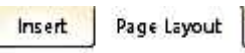


Model Question 2023
TRIBHUVAN UNIVERSITY
FACULTY OF MANAGEMENT
Office of the Dean

Full Marks: 40
Pass Marks: 20
Time: 2 Hr.

BBA/BIM/BBM/ Third Semester / STT 201: Business Statistics (Lab)

Candidates are required to answer all the questions using MS-Excel. The figures in the margin indicate full marks.

Important instructions

1. Write your name and roll number in question paper.
2. Create new folder on the desktop and rename it with your symbol number.
3. Click on **Page Layout** of  of the **Ribbon**, then click on both of Print  of **Gridlines** and **Heading**. Set up **Scale**  at 75%.

Click on middle one icon of view i.e.  After clicking on Click to add header, type your symbol number so that your answer sheet won't be misplaced.

4. Save your spreadsheet (your file) with your symbol number in the folder (named with your symbol number).
5. Make sure that you should not write beyond the column of the spreadsheet set under 75%.
6. For each and every calculation, don't forget to press **Ctrl + S** to save your essential work.
7. You should submit your hard copy (print) with your signature.

Practical Exam Questions Using MS-Excel

- 1) Draw a pie-chart from the following information: **[4]**

Items	Food	Rent	Cloth	Education	Health	Misc.
Percent	45	20	15	10	10	5

- 2) The following table shows the marks in Economics and Statistics 10 students of a campus: **[5]**

Economics	47	67	40	35	42	55	50	32	57	45
Statistics	42	38	48	37	39	31	46	44	52	43

- a. Find correlation coefficient between marks in Economics and Statistics.
- b. Find the expected marks of Statistics when marks in Economics is 55.

- 3) Fit binomial distribution to the following data : [5]

Values of X	0	1	2	3	4
f	10	20	40	25	15

- 4) A random sample of 100 students is found to have a mean weight of 55 kg and a standard deviation of 5 kg. Test hypothesis that the mean height of the population is 52 kg at 5% level of significance. [5]
- 5) A random sample of 50 gave a mean of 7.5 kg and standard deviation of 1.5 kg. Find 95% confidence limits for the population mean. [5]

- 6) The following table gives the length of life of 150 light bulbs: [5]

Life(00 hours)	No of light bulbs
10-12	10
12-14	15
14-16	30
16-18	60
18-20	20
20-22	10
22-24	5
Total	150

Find mean and standard deviation of the distribution.

- 7) Find the value of median from the following distribution: [5]

Class	0-10	10-20	20-30	30-40	40-50	50-60
Frequency	10	25	40	15	6	9

- 8) The following information shows the daily wages of workers of certain locality of Kathmandu valley. Calculate coefficient of kurtosis and interpret the data. [6]

Daily wages (Rs 00)	5-6	6-7	7-8	8-9	9-10	10-11	11-12
Workers	10	14	18	24	16	12	6

Model Question 2023
TRIBHUVAN UNIVERSITY
FACULTY OF MANAGEMENT
Office of the Dean

Full Marks: 60
Pass Marks: 30
Time: 3 Hr.

BBA/BIM/BBM/ Third Semester / STT 201: Business Statistics

GROUP'A'(10X1=10)

Brief Answer Question (Attempt all questions)

- 1) In a moderately asymmetric distribution, the values of mean and median are 16 and 20 respectively. Compute the value of mode.
- 2) If the values of lower and upper quartiles are 40 and 70 respectively, then calculate the quartile deviation.
- 3) Calculate combined mean from the following information:

	Group A	Group B
Mean	120	130
Number of observation	20	15

- 4) The coefficient of correlation between two variates X and Y is 0.8. Their covariance is 20. The variance of X is 16. Find the standard deviation of Y.
- 5) If quartile deviation of a distribution is 2 and their 90th and 10th percentiles are 24 and 16 respectively then find the value of kurtosis.
- 6) Calculate the Pearson's coefficient of skewness when mean, mode and standard deviation are 65 , 62 and 5 respectively.
- 7) Given that $P(A \cap B)=0.2$, $P(A)= 0.5$ and $P(B)= 0.4$, then find out the value of $P(A \cup B)$.
- 8) The mean of Poisson distribution $(\lambda) = 2$, find $P(x=2)$.
- 9) Calculate the standard error of mean when population size $(N) = 500$, sample size $(n) =50$ and standard deviation $(\sigma)=5$.
- (10) List out the types of random sampling techniques.

GROUP'B' (5X3=15)

Short Answer Question (Attempt any FIVE questions)

11) Find missing frequencies when mean value is 35 and total number of workers is 60.

Wage(Rs)	0-10	10-20	20-30	30-40	40-50	50-60
Workers	4	6	-	20	-	10

12) Systolic blood pressure of a sample of 400 males was taken. A sample mean blood pressure was found to be 128 mm and standard deviation 13 mm. Find 95% confidence limits of blood pressure within which the population mean would lie?

13) Find coefficient of quartile deviation from the following income table.

Monthly income (Rs)	Number of persons
Below 1000	50
1000-1999	500
2000-2999	555
3000-3999	100
4000-4999	300
5000 and above	15

14) The following information was obtained from two brand of cars A and B:

	A	B
No. of cars	50	60
Average life in years	11	12
Standard deviation	5	6

Which of the two brands shows greater consistency in its performance regarding to their life?

15) The following table shows the marks distribution of students in a campus.

Marks	0-10	10-20	20-30	30-40	40-50	50-60
frequency	10	20	45	15	8	3

Compute mode value of the marks distribution..

16) From the following distribution of marks of 500 students of a campus, find the lowest marks of the top 10% students.

Marks	No. of students
0-20	50
20-40	100
40-50	150
50-60	90
60-80	60
80-100	50

GROUP 'C'(3X5=15)

Long Answer Questions (Attempt any THREE questions)

17) From the following distribution of marks of 500 students of a campus, calculate the coefficient of skewness. Also, interpret the results.

Marks	No. of students
0-20	50
20-40	100
40-50	150
50-60	90
60-80	60
80-100	50

18) From the following distribution, find the percentile coefficient of kurtosis. Also comment the result.

Monthly income (Rs 000)	Number of workers
Below 100	5
100-199	50
200-299	55
300-399	10
400-499	30
500 and above	10

19) Daily expenditure on lunch of the staff of a bank of 400 employees was found to be normally distributed with mean of Rs 120 and standard deviation of Rs 20. Find the probability of employees having expenditure (a) between Rs 105 to Rs 140 (b) between Rs 125 to Rs 150.

20) A random sample of 100 students is found to have a mean weight of 65 kg and standard deviation of 20 kg. Test the hypothesis that at 5% level of significance the mean weight of the population is 60 kg.

GROUP'D'(1X20=20)

Comprehensive Answer Question

21) Following table shows the income and expenditure of people of certain locality of small town city of Nepal.

Expenditure in Rs	Income in Rs				
	0-5000	500-1000	1000-1500	1500-2000	2000-2500
0-4000	12	6	8	-	-
400-800	12	18	4	5	1
800-1200	-	8	10	2	4
1200-1600	-	1	10	2	1
1600-2000	-	-	1	2	3

Find out

(a) Equation of two regression lines.

(b) Correlation coefficient.

(c) Probable error and hence comment the result of correlation coefficient.

(d) Estimate the expenditure of a person whose income is Rs. 4000.

[10+3+5+2=20]