FYUG Odd Semester Exam., 2023
(Held in 2024)

STATISTICS

(1st Semester)

Course No. : STASEC–101T

(Data Analysis using Microsoft Excel)

Full Marks : 50
Pass Marks : 20

Time : 2 hours

The figures in the margin indicate full marks for the questions

SECTION—A

Answer *fifteen* questions, selecting any *three* from each Unit : 1×15=15

UNIT—I

1. Write the formula for dividing two numbers in Excel present in cell A1 and C1.

2. Write any two advantages of using Excel.

3. How to 'cut' and 'paste' data in Excel? Also, write how to clear cell content in Excel.

4. Write the difference between 'RAND' and 'RANDBETWEEN' function.

UNIT—II

5. How to remove gridlines from any chart in Excel?

6. What is the difference between Bar diagram and Histogram?

7. What type of data is presented using a line diagram?

8. How to change the 'front' of any chart title?

UNIT—III

9. Define three major measures of central tendency.

10. Define quartiles. Write down the relationship among quartiles, deciles and percentiles.

11. Write down the formula to compute third quartile in Excel.

12. What is range? Write down the formula for computing range in Excel.

UNIT—IV

13. Write down the equation for straight line.

14. How to draw a Scatter Plot in Excel?

15. Define adjusted R^2.

16. What is the difference between R^2 and adjusted R^2?

UNIT—V

17. Write down the difference between positive and negative correlation.

18. How to compute covariance in Excel?

19. Which function is used to compute correlation in Excel?

20. Define Spearman rank correlation.

SECTION—B

Answer *five* questions, selecting *one* from each Unit : 2×5=10

UNIT—I

21. Explain the functions MAX, MIN, SUM and COUNT.

22. How to import data in Excel?

UNIT—II

23. Define Box plot. How to draw Box plot in Excel?

24. How to add trendline in Excel?

UNIT—III

25. Define kurtosis. Which function is used to compute kurtosis in Excel? If we have values 1, 5, 7, 9, 11 in cells B1 to B5, then write down the steps for computing kurtosis in Excel.

26. Define skewness. Explain the steps to compute skewness in Excel. Interpret the results Mean = 15, Median = 12 and Mode = 10 in the context of skewness.

UNIT—IV

27. Define R^2 mentioning its interpretation, uses and limitations.

28. How to install Data Analysis ToolPak in Excel?

(Continued)

UNIT—V

29. Define pivot table. Write any four applications of pivot table.

30. Write about a situation where 'VLOOKUP' function can be used.

SECTION—C

Answer *five* questions, selecting *one* from each Unit : 5×5=25

UNIT—I

31. Explain briefly the different ways in which we can handle missing values in Excel. Also, write how to export data in 'XLSX' and 'CSV' format in Excel.

32. What is data validation? Explain different steps to volidate data in Excel. Also, explain these steps with one example.

UNIT—II

33. Write down the steps for drawing the following :

(a) Histogram

(b) Bar diagram

(c) Pie diagram

(d) Line diagram

(e) Ogive (both more than and less than type)

(f) Frequency polygon in Excel

34. Explain how to locate median in Excel. Also, write down the steps for labeling *X*-axis and *Y*-axis for any chart in Excel.

UNIT—III

35. Write down the formula for computing the following :

(a) Average of the values present in the cells A1 to A100

(b) Median of the values present in the cells B1 to B12

(c) Mode of the values present in the cells C1 to C15

(d) 3rd, 5th and 7th decile values, present in the cells D1 to D10

(e) 25th, 37th, 58th, 60th percentile values present in the cells E5 to E92

36. Define variance, standard deviation, coefficient of variation and mean deviation. Write down the formula for computing variance, standard deviation, CV and MD for the values present in the cells A1 to A95 in Excel.

UNIT—IV

37. Explain briefly the different steps used to fit a straight line in Excel.

38. Write down the steps for fitting polynomial of degree 2 and 3 in Excel. Also, explain how to identify which model (polynomial of degree 2 or 3) is best fitted in our data set.

UNIT—V

39. Write down the steps for joining two datasets using 'VLOOKUP' function :

Data Set 1		
ID	*Name*	*Weight*
1	*A*	50
2	*B*	55
3	*C*	35
4	*D*	45
5	*E*	67

Data Set 2	
ID	*Height* (in inches)
1	5·6
3	6·1
4	4·7
5	5·4
6	6·3

40. Explain any four relational and logical operators used in Excel.

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