

2024

COMPUTER SCIENCE — HONOURS

Paper : SEC-1

(Session : 2024-25)

(Data Visualization using Spreadsheet)

Full Marks : 50

The figures in the margin indicate full marks.

*Candidates are required to give their answers in their own words
as far as practicable.*

Answer **question no. 1** and **any four** from the rest.

1. Answer **any five** questions of the following : 2×5
- (a) Identify the application areas of data visualization.
 - (b) Mention the purpose of “Goal Seek” feature.
 - (c) How are formulas different from functions in Excel?
 - (d) Define macros.
 - (e) Define data aggregation.
 - (f) Write an Excel formula to find average of the cells C1, C2, C3, C4, C5, C6, C7 and C8 whose values are less than 100.
 - (g) What is absolute cell address in Excel?
 - (h) How will you set comments in a cell?
2. (a) Explain, how Excel spreadsheet can be protected.
- (b) Name any two text functions in Excel.
- (c) State the difference between SUM and SUMIF functions. Explain with appropriate examples. 4+1+(3+2)
3. (a) What are scenarios? How can you create a scenario summary?
- (b) Explain the purpose of Monte Carlo simulation in Excel. (2+3)+5
4. (a) Using appropriate examples, differentiate between absolute addressing and relative addressing in Excel.
- (b) How can you share data in spreadsheet?
- (c) Write the steps to create pivot charts. 4+3+3

Please Turn Over

(1180)

5. (a) How can you remove duplicate values in a range of cells?
 (b) Given a record of 10 students in column A and their course in column B, write steps to highlight all cells where the course is B.Sc. 4+3+3
 (c) Write an Excel formula to find years of experience of an employee when the Date of Joining is given in cell D3.
6. (a) State with examples, how AND function, OR function and NOT function work.
 (b) Discuss grouping and ungrouping of data. (2+2+2)+(2+2)
7. You are managing a store's inventory and want to determine whether each product needs to be restocked based on its current stock level. Below is the inventory data :

Product Name	Current Stock	Reorder Level	Restock Status
Product A	50	30	
Product B	20	25	
Product C	10	15	
Product D	35	40	
Product E	60	50	

- (a) In the "Restock Status" column, write a formula using the IF () function to display : "Yes" if the Current Stock is less than the Reorder Level. "No" otherwise. Why is IFERROR function used?
- (b) Write a formula to calculate the average of values in the range B2:B20, excluding blank cells.
- (c) How can you use the TRIM function to clean up extra spaces in a text column? (4+1)+3+2
8. (a) What do you understand by Exploratory data analysis? How can Excel be used for the same?
 (b) What are trendlines and legends with respect to a graph?
 (c) How can we add calculated fields in a pivot chart? (3+2)+3+2

(3)

B(1st Sm.)-Computer Science-H/SEC-1/CCF

Paper : SEC-1

(Session : 2023-24)

(Data Visualization using Spreadsheet)

Full Marks : 75

The figures in the margin indicate full marks.

*Candidates are required to give their answers in their own words
as far as practicable.*

Answer **question no. 1**, **any three** from **Section-A** and **any five** from **Section-B**.

1. Answer **any five** questions : 2×5
- (a) State advantages of spreadsheet over word processor.
 - (b) What is the default height of a row of spreadsheet? How can it be increased?
 - (c) Name any 2 types of charts alongwith their applications.
 - (d) Find the output of the following formula for each case : = MAX(G1 : G6, 100) assuming the values from G1 to G6 are
 - (i) 12, 77, 24, 90, 84, 121 and
 - (ii) 76, 29, 94, 64, 37, 12.
 - (e) What is the purpose of Pivot Table and chart?
 - (f) State difference between sorting and filtering.
 - (g) What do you mean by outliers in data?
 - (h) How will you set comments in a cell?

Section - A

- 2. Name three popular spreadsheet software tools and a unique feature of each. Give the steps to remove duplicate data. 3+2
- 3. Discuss different conditional formatting rules. 5
- 4. Explain with example the use of VLOOKUP() and HLOOKUP() function. 2½+2½
- 5. Write down steps to import and export data from and to a file. 2½+2½
- 6. What do you mean by correlation regression analysis? 5

Section - B

- 7. (a) Write the steps to create a histogram in Excel.
- (b) You are given sales data for some products of a company. Different fields are Name of the Product, Month of Sales, Total Sales in Qty. Describe at least two charts to visualize the data.
- (c) What are chart titles and axis titles? 3+5+2

Please Turn Over

(1180)

8. (a) What is the purpose of Goal-seek in spreadsheet? Illustrate with example.
 (b) How will you hide or unhide rows?
 (c) Write down difference between autofill and autocopy. (2+4)+2+2
9. (a) Define standard deviation and variance. Write down the function statements to find standard deviation and variance of a set of data.
 (b) Write down the steps to rename worksheet.
 (c) What are the cell addresses of first and last cell in a worksheet? (2+4)+2+2
10. A worksheet contains name and marks in 4 subjects (out of 50).

E3		f		43			
A	B	C	D	E	F	G	H
Name	Sub1 (out of 50)	Sub2 (out of 50)	Sub3 (out of 50)	Sub4 (out of 50)	Total (out of 200)	Percentage	Grade
1 Romit Das	25	28	32	34			
2 Sohini Roy	33	45	47	43			
3 Dipak Das	12	24	28	38			
4 Rohan Basu	39	33	43	45			
5							
6 Highest in each						Total No. of failed candidate	
7 subjects							

Write formula to calculate

- (a) Total Marks(out of 200)
 (b) Percentage
 (c) Grade
 (d) Highest marks in each subjects
 (e) Total number of failed candidates
 (f) Write steps to create column chart on name and percentage.

Grade will be calculated as per rules given.

Percentage

< 30

>= 30 and < 45

>= 45 and < 60

>= 60 and < 80

>= 80

Grade

F

C

B

A

E

1+1+2+1+2+3

11. Explain purpose, syntax and examples with output of the following functions : 2½×4
- (a) Date()
 - (b) Concatenate()
 - (c) IFERROR()
 - (d) OR()
12. (a) Write down the different chart elements with their uses.
(b) Differentiate Save and SaveAs option.
(c) Write steps to identify wrongly entered data by indicating with circle. 4+2+4
13. (a) What do you mean by forecasting of data? Write steps to implement it in spreadsheet using trend lines.
(b) Write down difference between Median and Mode of a set of discrete data.
(c) How will you customise Quick access tool bar? (2+3)+3+2
14. Write short notes on (*any two*) : 5×2
- (a) Data validation and Error checking
 - (b) Protection of workbook and worksheet
 - (c) ANOVA table and formulas
 - (d) Data segmentation and drill-down analysis.
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