

6. (a) Explain HLOOKUP and VLOOKUP with the help of an example. Write down one important difference between them. (5)
- (b) Differentiate between Normal and Uniform distribution? (6)
- (c) Differentiate between formula and function with example. (2)
- (d) Name any two Date & Time function in excel. (2)
7. (a) Write a short note on the following (any two):
- (i) Cell formulae
 - (ii) Array formulae
 - (iii) Multilayer Sorting (5)
- (b) Explain Referencing in excel? Describe the types of referencing with the help of suitable examples? (7)
- (c) Explain the measures of Central Tendency? (3)

(1000)

[This question paper contains 8 printed pages.]

Your Roll No.....

Sr. No. of Question Paper : 6061

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Unique Paper Code : 2344001202

Name of the Paper : Data Analysis And Visualization
Using Spreadsheet

Name of the Course : **Generic Elective (NEP-
UGCF-2022) Part-I**

Semester : II

Duration : 3 Hours

Maximum Marks : 90

Instructions for Candidates

1. Write your Roll No. on the top immediately on receipt of this question paper.
2. **Section A** is compulsory.
3. Attempt any four questions from **Section B**.
4. Parts of a question must be answered together.

Section A

1. (a) Write the Excel formulas for calculating median, mode and variance for the following data. (3)

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	A	B	C	D	E	F	G	H	I
1	10	15	35	20	25	50	30	40	45

(b) What is Data Validation? Illustrate with an example (3)

(c) Write the steps to create a pivot table to display the product names and their corresponding total sales. (4)

	A	B	C	D
1	Salesperson	Products	Quarters	Total Sales
2	A1	A.C.	Q1	228
3	A2	Microwave	Q2	163
4	A3	A.C.	Q1	233
5	A4	Fan	Q1	213
6	A5	Microwave	Q2	267
7	A6	Cooler	Q1	245

(d) Differentiate between Pivot charts and standard charts. (3)

(e) What do you understand by Data Wrangling? Why it is required? (3)

(f) Given the bivariate data (5)

X	6	8	9	4	12
Y	34	6	10	9	8

Write the syntax of "COUNTIF" to count the following :

(i) Sales greater than \$250

(ii) Sales of TV

(iii) Sales of Emp ID = 101.

(b) What is the usage of defined names in a spreadsheet? (2)

(c) Explain the measures of spread data management. (3)

(d) Write down the steps for creating a Line Chart. For which kind of data it is most suitable? (4)

5. (a) Give syntax and example of any three Cube formulas to retrieve the data from data model. (6)

(b) Explain correlation coefficient? Describe its types with the help of a diagram. (4)

(c) What is Box Plot? Write down the steps to create a Box & Whisker (Box Plot) chart in excel. (5)

3. (a) Calculate the Total of Maths in cell C8 by using Index and Match Function : (4)

	A	B	C	D	E
1	Subjects	1st Term	2nd Term	3rd Term	Total
2	Hindi	90	68	78	236
3	English	45	87	46	178
4	Maths	67	76	91	234
5	Science	89	45	45	179
6	Computers	90	78	56	224
7					
8	Total	Maths			

- (b) Explain "What if analysis" and its types with the help of suitable examples. (7)

- (c) Give syntax and examples of any two DAX aggregate functions in excel. (4)

4. (a) Consider the following Employee data. (6)

	A	B	C
1	Emp Id	Product	Sales
2	100	Washing Machine	500
3	101	Refrigerator	200
4	103	Microwave	350
5	104	TV	220
6	101	Geyser	300
7	106	Refrigerator	280
8	104	TV	400
9	106	Washing Machine	250

Fit the regression line of X on Y and hence predict X if Y=3.

- (g) Differentiate between DAX calculated columns and DAX measures with the help of an example. (3)

- (h) Write the Excel formula for the following : (2)

Multiply the value in cell A1 by 10 then add value 5 and divide it by 2.

- (i) Differentiate between SUM and SUMIF functions in excel with example. (2)

- (j) Why Wrap Text feature is used in alignment of a text written in a cell? (2)

Section – B

2. You work for a company planning to recycle plastic waste washed up on the beaches of many islands in the Maldives. All the data for this is given in the following spreadsheet. Apply different formulas as given below :

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	A	B	C	D	E	F	G
1	Island code	Island Name	Distance from recycling plant				
2	M1	AD	150		Island Code	M4	
3	M2	GK	70		Island Name		
4	M3	TH	100		Distance from Recycling Plant		Miles
5	M4	JK	90		Return Distance		Miles
6	M5	MK	120		Return Journey Time		Hours
7	M6	RT	80		Fuel used for Journey		Litres
8					Fuel cost for Journey		
9	Cost of Plastic Removal for One Island				Number of Crew Required		
10	Fuel Cost	1.451	per litre				
11	Fuel Consumption	102.5	litres/hour				
12	Operating Speed	17	Knots				
13	1 kont is	1.15	Mph				

(a) In cell F3 write a function to lookup the name of the island using the code entered in cell F2.

(2)

(b) In cell F4 write a function to lookup the distance of the island from the recycling plant using the code entered in cell F2.

(2)

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(c) In cell F5 write a formula to calculate the total distance traveled to the island and back using the value entered in cell F4. (2)

(d) In cell F6 write a formula to calculate the number of hours the return journey will take which is calculated as:

Return distance/Operating speed $\times$ the contents of cell B13 (2)

(e) In cell F7 write a formula to calculate the fuel used for the journey. This is calculated as :

Return journey time $\times$ Fuel consumption (2)

(f) In cell F8 write a formula to calculate the fuel cost for the journey. (2)

(g) In cell F9 write a formula to display (3)

- Value 4 if journey time is less than 10 hours
- Value 6 if journey time is greater than or equal to 10 hours and less than or equal to 15 hours
- Value 9 if journey time is greater than 15 hours

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