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Greater Noida
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Plot No. 2, Knowledge Park-III, Greater Noida (U.P.) –201306
POST GRADUATE DIPLOMA IN MANAGEMENT (2025-27)
MID TERM EXAMINATION (TERM -II)

Subject Name: Advanced Excel and Data Visualization	Time: **01.00 hrs**
Sub. Code: PG209	Max Marks: **20**

Note: All questions are compulsory.

Answer the following questions carefully   **40×0.5 = 20 Marks**

Kindly write the all the course outcomes as per your TLEP in the box given below:

CO1- Use advanced Excel features to build analytical models using Pivot Tables, Charts, and interactive dashboards
CO2- Evaluate best, worst and most likely case scenarios for varied business problems
CO3- Analyze and collaborate on data using Google Sheets functions and integrated tools.
CO4- Integrate Power Query for extracting, transforming, and loading structured datasets.
First 20 questions are mapped with CO1 (L4) and last 20 questions are mapped with CO2 (L3).

To answer **questions 1 to 4**, assume the following data is in a sheet named **Products**, starting at cell **A1**.

	A	B	C	D
1	**Product ID**	**Name**	**Category**	**Price**
2	AX101	Laptop A	Electronics	1200
3	BY202	Keyboard B	Accessories	75
4	CZ303	Monitor C	Electronics	350
5	AX101	Mouse D	Accessories	25
6	DZ404	Printer E	Peripherals	150
7	EZ505	Tablet F	Electronics	500

1. A user enters the following formula in cell E2:
   =VLOOKUP(A2,A2:D7,3,FALSE)
   What result will be returned by this formula?

   A. Electronics

   B. Accessories

   C. #N/A

   D. Laptop A

Correct Answer: A

2. A user is trying to find the price for a new ID 'FZ606'. What will be the result of the following function?

=VLOOKUP("FZ606",A2:D7,4,FALSE)

A. #REF!

B. 500

C. #N/A

D. 150

Correct Answer: C

3. If cell E2 contains:

=IFERROR(VLOOKUP("GX707",A2:D7,2,FALSE),"Not Found)
What is the output?

A. #N/A

B. #REF!

C. Not Found

D. Tablet F

Correct Answer: C

4. A user wants to find the category for *any* product starting with "Key". What is the result of:
=VLOOKUP("Key*",B2:C7,2,FALSE)

A. #N/A

B. Accessories

C. Electronics

D. Keyboard B

Correct Answer: B

To answer the **questions 5 to 6**, assume the following data is in a sheet named **Tiers**, starting at cell **A1**. This table is used to determine a customer's discount based on their lifetime sales value.

	A	B
1	**Minimum Sales**	**Discount Rate**
2	0	0%
3	1000	5%
4	5000	10%
5	15000	15%
6	30000	25%

5. A customer has lifetime sales of $3500. Which discount rate will the following formula return?

=VLOOKUP(3500,A2:B6,2,TRUE)

A. 0%

B. 5%

C. 10%

D. #N/A

Correct Answer: B

6. A customer has lifetime sales of $4999. Which discount rate will the following formula return?

=VLOOKUP(4999,A2:B6,2,TRUE)

A. 0%

B. 5%

C. 10%

D. #N/A

Correct Answer: B

To answer the **questions 7 to 8**, assume the following quarterly sales data is in a sheet named **Sales_Data**, starting at cell **A1**.

	A	B	C	D	E
1	Item	Q1	Q2	Q3	Q4
2	Laptop	150	180	170	200
3	Monitor	250	240	260	300
4	Keyboard	400	450	390	420
5	Mouse	600	620	580	650

7. A user wants to find the Q2 sales for 'Keyboard'. What is the correct formula?

A. =INDEX(B2:E5, 3, 2)

B. =INDEX(A2:E5, MATCH("Keyboard", A2:A5, 0), MATCH("Q2", A1:E1, 0))

C. =INDEX(A2:E5, MATCH("Keyboard", A2:A5, 0), 3)

D. =INDEX(B2:E5, MATCH("Keyboard", A2:A5, 0), MATCH("Q2", B1:E1, 0))

Correct Answer: D

    8. What value does the following formula return?

=INDEX(D2:D5,MATCH("Mouse",A2:A5,0))

    A. 580

    B. #REF!

    C. 420

    D. 600

Correct Answer: A

To answer the **questions 9 to 12**, assume the following data is in a sheet named **Staff_List**, starting at cell **A1**.

	A	B	C	D
1	**Employee ID**	**Name**	**Department**	**Hire Year**
2	E101	Alice	Sales	2020
3	E102	Bob	Marketing	2018
4	E103	Charlie	IT	2021
5	E104	David	Sales	2019

    9. What does this formula return? **=MATCH("Charlie",B2:B5,0)**

    A. 2

    B. 3

    C. 4

    D. #N/A

Correct Answer: B

    10. What value does the following formula return? **=INDEX(C2:C5,4)**

    A. IT

    B. Sales

    C. E104

    D. David

Correct Answer: B

    11. What is the result of this formula? **=INDEX(D2:D5,MATCH("Bob",B2:B5,0))**

A. 2020

B. 2018

C. 2021

D. Marketing

Correct Answer: B

12. Which of the following formulas is the best structure to find the Department for the employee with ID E104?

A. =INDEX(C2:C5, MATCH("E104", B2:B5, 0))

B. =INDEX(A2:D5, MATCH("E104", A2:A5, 0), 3)

C. =INDEX(A2:D5, 3, MATCH("E104", A2:A5, 0))

D. =VLOOKUP("E104", A2:D5, 3, FALSE)

Correct Answer: B

13. The main reason to use the "Text to Columns" feature is to:

A. Combine data from multiple cells into one cell.

B. Separate data contained within a single cell into multiple columns.

C. Convert numbers stored as text into actual numerical values.

D. Change the font or formatting of text.

Correct Answer: B

14. You have a column where each cell contains data formatted like this: ProductA-150-Blue. Which type of delimiter should you choose in the Text to Columns wizard to split this data correctly?

A. Comma

B. Space

C. Semicolon

D. Other (using the hyphen -)

Correct Answer: D

15. Before running the "Text to Columns" feature, your combined data is in cell **A1**. If you specify the **Destination** as **B1**, what happens to the original data in A1?

A. It is deleted entirely.

B. It remains in A1 unchanged, and the split data starts in B1.

C. It is automatically moved to a new row.

D. It is overwritten by the first part of the split data.

Correct Answer: B

Use the following **Sales_Performance** table to answer the **questions 16 to 18.**

	A	B	C	D
1	**Employee**	**Region**	**Units Sold**	**Target Met?**
2	Alice	East	120	Yes
3	Bob	West	85	No
4	Charlie	North	150	Yes
5	David	South	95	No
6	Eve	East	100	Yes
7	Frank	West	130	Yes
8	Grace	North	70	No

16. Highlight the Units Sold (Column C) **only if** the employee's sales are lower than the employee immediately above them. Which custom formula, applied to the range **C3:C8**, achieves this goal?

A. =C2>C3

B. =C3<C2

C. =$C3<C2

D. =C3<$C2

Correct Answer: B

17. Which Conditional Formatting rule is designed to show the distribution of Units Sold data (C2:C8) by applying a continuous color gradient from the lowest value (e.g., Red) to the highest value (e.g., Green)?

A. Highlight Cells Rules (e.g., Greater Than)

B. Top/Bottom Rules (e.g., Top 10%)

C. Color Scales

D. Icon Sets (e.g., Arrows)

Correct Answer: C

18. Highlight any cell in the Units Sold column (C2:C8) that results in a division error (#DIV/0!) due to bad source data. Which custom formula should be used?

A. =ISNA(C2)

B. =C2="Error"

C. =ISERROR(C2)

D. =ISERR(C2)

Correct Answer: C

19. A user applies a **Top 10%** rule to a list of 25 sales values. How many cells will be highlighted?

A. 10 cells

B. 3 cells

C. 4 cells

D. None of the above

Correct Answer: B

20. Which requirement is best suited for an **Icon Set** (e.g., 3-Color Traffic Lights)?

A. Highlighting all cells that contain the word "Completed."

B. Visually classifying data into distinct categories (e.g., Good, Neutral, Bad) based on thresholds.

C. Identifying the single highest value in a range.

D. Creating a custom border around every cell greater than 50.

Correct Answer: B

21. You have three rules applied to Units Sold column:

I. **Rule 1 (Top):** If C2 > 100 (Fill: Blue, **Stop If True**)
II. **Rule 2 (Middle):** If C2 > 80 (Fill: Green)
III. **Rule 3 (Bottom):** If C2 > 50 (Fill: Yellow)

If the value in cell C2 is **110**, what is the resulting color of cell C2?

A. Yellow

B. Green

C. Blue

D. No Fill

Correct Answer: C

	A	B	C	D
1	**Order ID**	**Product**	**Region**	**Quantity**
2	1001	Mouse	East	10
3	1002	Keyboard	West	5
4	1001	Mouse	East	10
5	1003	Monitor	North	8
6	1004	Mouse	East	12
7	1002	Keyboard	West	5
8	1005	Monitor	North	8

22. A user selects the entire range (A2:D8) and runs "Remove Duplicates," but **only checks the 'Order ID' column** (A). How many total rows will remain after the operation?

A. 3 rows

B. 4 rows

C. 5 rows

D. 8 rows

Correct Answer: C

23. The user selects the entire data set (A1:D8) and runs "Remove Duplicates," checking **ONLY the 'Region' column** (C). How many rows of data (excluding the header) will remain, and what is the last remaining region in the list?

A. 4 rows; North

B. 4 rows; South

C. 8 rows; North

D. 3 rows; North

Correct Answer: D

24. What is the conceptual cause of the **#DIV/0!** error?

A. A formula is referring to a cell that has been deleted.

B. A formula attempts to divide a number by a cell that contains text.

C. A formula attempts to divide a number by a cell that contains zero or is empty.

D. A formula attempts to divide a number by a value that is too large.

Correct Answer: C

25. A user enters the formula =A1+B1. Cell A1 contains the number 100, and cell B1 contains the text string "Hello". Which error will result?

A. #NAME?

B. #REF!

C. #VALUE!

D. #NUM!

Correct Answer: C

26. When does the ##### error (a string of hash symbols) typically appear in a cell?

A. When a formula contains an invalid or misspelled function name.

B. When the cell contains a numerical result (number or date/time) that is too wide to fit in the current column width.

C. When a formula refers to a non-existent sheet or range.

D. When a date or time value is negative.

Correct Answer: B

A formula in cell C1 is =SUM(A1:B1). A user then **deletes Column B**. Which error will appear in cell C1?

A. #NAME?

B. #REF!

C. #VALUE!

D. #NULL!

Correct Answer: B

27. You are using the formula =VLOOKUP("Apple", A1:B10, 2, FALSE). Assuming the fruit "Apple" is **not** found in the lookup column (A1:A10), what error will be returned?

A. #NUM!

B. #REF!

C. #VALUE!

D. #N/A

Correct Answer: D

28. A user attempts to calculate a total by entering the formula =SUMM(A1:A10) instead of =SUM(A1:A10). Which error will be returned?

A. #NUM!

B. #NAME?

C. #REF!

D. #NULL!

Correct Answer: B

29. If you want to create a dropdown menu in a cell that only allows users to select from a predefined set of text options, which Data Validation setting must you use?

A. Whole Number

B. Text Length

C. List

D. Date

Correct Answer: C

30. When setting up Data Validation, what is the purpose of the **Input Message** tab?

A. To stop invalid data from being entered.

B. To display a helpful pop-up message *before* the user starts typing in the cell.

C. To display a mandatory error message *after* the user enters invalid data.

D. To define the range of acceptable values.

Correct Answer: B

31. What is the primary function of a Pivot Table in data analysis?

A. To hide selected data rows and columns from view.

B. To summarize, aggregate, and rearrange large amounts of data for reporting and analysis.

C. To sort and filter data quickly based on a single column.

D. To automatically apply conditional formatting rules to cells.

Correct Answer: B

32. If you drag a numerical field (e.g., 'Sales Amount') into the **VALUES** area of a Pivot Table, what is the default aggregation function typically applied to that field?

A. AVERAGE

B. COUNT

C. SUM

D. MIN

Correct Answer: C. SUM

33. What is the essential requirement for the source data columns before creating a reliable Pivot Table?

A. The data must be pre-sorted in ascending order.

B. All columns must contain numerical data only.

C. Every column must contain a unique and descriptive header (field name).

D. The data must be in an Excel Table object.

Correct Answer: C

34. If you want to view a calculation broken down both by 'Region' (shown vertically) and 'Month' (shown horizontally), which two Pivot Table areas would you use?

A. Region in FILTERS, Month in ROWS.

B. Region in VALUES, Month in COLUMNS.

C. Region in ROWS, Month in COLUMNS.

D. Both Region and Month in ROWS.

Correct Answer: C

35. If you want to calculate a total (e.g., Sum of Quantity) or an average, where in the Pivot Table field list should you place that numerical field?

A. ROWS area

B. COLUMNS area

C. FILTERS area

D. VALUES area

Correct Answer: D

36. If you accidentally drag a **text field** (like 'Customer Name') into the **VALUES** area, what default aggregation function will the Pivot Table typically apply?

A. SUM

B. AVERAGE

C. COUNT

D. MAX

Correct Answer: C

37. If the PivotTable Fields List has accidentally closed, how do you reopen it?

A. Right-click the Pivot Table and select 'Show Field List.'

B. Click the 'Analyze' (or 'PivotTable Analyze') tab on the ribbon and click the **Field List** button.

C. Press the F1 key.

D. Both A and B.

Correct Answer: D

38. You want to change the calculation in your Pivot Table from **SUM** to **AVERAGE**. Where do you access the settings to make this change?

A. Right-click the Grand Total row label.

B. Double-click the cell containing the calculated value (e.g., the cell labeled 'Sum of Sales').

C. Click the dropdown arrow next to the field name in the **VALUES** area of the Field List, and select **Value Field Settings**.

D. Click the Design tab and select 'Change Data Source.'

Correct Answer: C

39. If you want to add a Slicer to your Pivot Table for interactive filtering, where do you find the command to insert a Slicer?

A. The View tab on the ribbon.

B. The Insert tab on the ribbon.

C. The **Analyze** (or PivotTable Analyze) tab on the ribbon.

D. The Home tab under "Find & Select."

Correct Answer: C

40. What does the letter 'H' in the function name HLOOKUP refer to?

A. High

B. Height

C. Horizontal

D. Helper

Correct Answer: C