

--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

NOIDA INSTITUTE OF ENGINEERING AND TECHNOLOGY, GREATER NOIDA

(An Autonomous Institute Affiliated to AKTU, Lucknow)

BCA

SEM: II - THEORY EXAMINATION (20..... - 20.....)

Subject: Data Analytics using Excel/ Power BI /Google Analytics

Time: 3 Hours

Max. Marks: 100

General Instructions:*IMP: Verify that you have received the question paper with the correct course, code, branch etc.**1. This Question paper comprises of three Sections -A, B, & C. It consists of Multiple Choice Questions (MCQ's) & Subjective type questions.**2. Maximum marks for each question are indicated on right -hand side of each question.**3. Illustrate your answers with neat sketches wherever necessary.**4. Assume suitable data if necessary.**5. Preferably, write the answers in sequential order.**6. No sheet should be left blank. Any written material after a blank sheet will not be evaluated/checked.***SECTION-A**

20

1. Attempt all parts:-

- 1-a. Select the function calculates number of periods for an investment or loan- (CO1, K1) 1
- (a) PV
- (b) NPER
- (c) PMT
- (d) RATE
- 1-b. Find out the function is used to add values based on a condition? (CO1, K2) 1
- (a) SUM
- (b) ADD
- (c) SUMIF
- (d) TOTAL
- 1-c. Identify the first step in creating a PivotTable in Excel- (CO2, K2) 1
- (a) Select the output location
- (b) Select the data source
- (c) Choose the PivotTable report layout
- (d) Add fields to the Row and Column areas
- 1-d. Use of Slicer in PivotTables in MS Excel- (CO2, K1) 1
- (a) To filter data visually and interactively
- (b) To perform calculations

- (c) To change the layout of the PivotTable
- (d) To group items in the PivotTable
- 1-e. The main objective of Power BI is- (CO3, K1) 1
 - (a) Advanced text editing
 - (b) Data analysis and visualization
 - (c) Creating complex spreadsheets
 - (d) Managing email communications
- 1-f. The name of Power BI component is primarily used for building and designing reports- (CO3, K1) 1
 - (a) Power BI Service
 - (b) Power BI Mobile
 - (c) Power BI Desktop
 - (d) Power BI Embedded
- 1-g. Select Power BI visualization is specifically designed to display geographical data- (CO4, K1) 1
 - (a) Treemap
 - (b) Scatter chart
 - (c) Funnel chart
 - (d) Map
- 1-h. How do page-level filters affect a Power BI report? (CO4, K2) 1
 - (a) They apply to all visuals in the entire report
 - (b) They apply only to the selected visual
 - (c) They apply to all visuals on a specific page
 - (d) They apply only to the underlying data model
- 1-i. Identify the report in Google Analytics helps you understand where your website traffic originates- (CO5, K1) 1
 - (a) Behavior Report
 - (b) Audience Report
 - (c) Acquisition Report
 - (d) Conversion Report
- 1-j. The report in Google Analytics helps you analyze how users interact with your website content is- (CO5, K2) 1
 - (a) Behavior Report
 - (b) Audience Report
 - (c) Acquisition Report
 - (d) Conversion Report

2. Attempt all parts:-

- 2.a. Write down purpose of the AUTOSUM feature in Excel and how it differs from 2

- manually typing the SUM function. (CO1, K1)
- 2.b. Express the importance of relationship between a PivotChart and its PivotTable. (CO2, K1) 2
- 2.c. List any two types of visualizations available in Power BI. (CO3, K1) 2
- 2.d. State the importance of filters in Power BI visualizations. (CO4, K2) 2
- 2.e. Discuss the primary purpose of Google Analytics? (CO5, K1) 2

SECTION-B 30

3. Answer any five of the following:-

- 3-a. Illustrate the COUNT, COUNTIF, and COUNTIFS functions in Excel. Create an example where each function could be applied, and explain how they differ. (CO1, K4) 6
- 3-b. Briefly explain the purpose of the WEEKDAY and DATEVALUE function and provide an example of how it might be used. (CO1, K3) 6
- 3-c. Justify the use of “Use Relative Reference” over absolute reference in real world examples. (CO2, K2) 6
- 3-d. Illustrate how to record a macro that formats a data table (e.g., applies borders, bold headers, and color). (CO2, K2) 6
- 3.e. Explain how to apply a filter to a chart in Power BI. (CO3, K1) 6
- 3.f. Create a basic report using at least three different visualizations on the Power BI Canvas. What steps would you follow? (CO4, K3) 6
- 3.g. Explain the advantages of different types of reports in Google Analytics. (CO5, K1) 6

SECTION-C 50

4. Answer any one of the following:-

- 4-a. Describe the PMT and IPMT function in Excel and explain how it helps to calculate the interest portion of a loan payment. (CO1, K3) 10
- 4-b. Explain how the VLOOKUP function works in Excel, including a step-by-step process of how to use it. Provide an example where VLOOKUP helps in looking up employee salaries based on their ID numbers. (CO1, K3) 10

5. Answer any one of the following:-

- 5-a. Create a scenario manager where you have sales data from multiple months. Write the proper steps with diagram for at least 3 assumptions. (CO2, K3) 10
- 5-b. Create a simple PivotChart from a PivotTable and explain how the chart remains connected to the data changes in the PivotTable. (CO2, K3) 10

6. Answer any one of the following:-

- 6-a. Illustrate three different types of visualizations available in Power BI with diagram. (CO3, K4) 10
- 6-b. What are the advantages of creating reports with multiple pages? Also mention proper steps for creating reports. (CO3, K3) 10

7. Answer any one of the following:-

- 7-a. Elaborate on the use of "Report Filters" in Power BI. Explain how they impact the entire report and provide an example of a report-level filter you might implement. (CO4, K2) 10
- 7-b. Discuss the importance of using filters effectively in Power BI reports to focus insights and improve performance. Explain one common mistake to avoid when applying filters. (CO4, K2) 10

8. Answer any one of the following:-

- 8-a. Explain in detail the main sections of the Google Analytics interface. Briefly describe the primary functions and types of information found within each section. (CO5, K1) 10
- 8-b. Explain in detail how the Acquisition Overview report helps in understanding website traffic sources. (CO5, K1) 10

REG:JAN_JUN-2025