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NOIDA INSTITUTE OF ENGINEERING AND TECHNOLOGY, GREATER NOIDA
(An Autonomous Institute Affiliated to AKTU, Lucknow)

BCA

SEM: II - THEORY EXAMINATION (2025 - 2026)

Subject: Business Intelligence & 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:-

- | | | |
|-------|--|---|
| (1.1) | Identify the function used for multiple condition addition. (CO1,K2) | 1 |
| (a) | SUM | |
| (b) | ADDIFS | |
| (c) | SUMIF | |
| (d) | SUMIFS | |
| (1.2) | Identify the function used to calculate number of periods. (CO1,K2) | 1 |
| (a) | PV | |
| (b) | RATE | |
| (c) | NPER | |
| (d) | FV | |
| (1.3) | Choose the area where fields are placed for calculations in PivotTable. (CO2,K2) | 1 |
| (a) | Rows | |
| (b) | Columns | |
| (c) | Values | |
| (d) | Filters | |
| (1.4) | Recognize the tool used to analyze data using scenarios. (CO2,K2) | 1 |
| (a) | Goal Seek | |
| (b) | Scenario Manager | |
| (c) | Data Table | |
| (d) | Filter | |
| (1.5) | Recognize the feature used for drill-down analysis. (CO3,K3) | 1 |

- (a) Filter
 - (b) Sort
 - (c) Group
 - (d) Drill
- (1.6) Identify the advantage of Power BI over Excel. (CO3,K3) 1
- (a) Limited visuals
 - (b) Advanced analytics
 - (c) Manual work
 - (d) Static reports
- (1.7) Select the visual used to display geographical data. (CO4,K1) 1
- (a) Table
 - (b) Chart
 - (c) Map
 - (d) Card
- (1.8) Choose the feature used to filter visuals individually. (CO4,K3) 1
- (a) Page Filter
 - (b) Report Filter
 - (c) Visual Filter
 - (d) Data Filter
- (1.9) Select the feature used to track user activity. (CO5,K2) 1
- (a) Filter
 - (b) Tracking
 - (c) Table
 - (d) Chart
- (1.10) Recognize the feature used to divide users into groups. (CO5,K2) 1
- (a) Segment
 - (b) Filter
 - (c) Chart
 - (d) Table

2. Attempt all parts:-

- (2.1) Explain the use of PMT function in financial calculations. (CO1,K3) 2
- (2.2) Describe the purpose of Data Table. (CO2,K2) 2
- (2.3) List any two advantages of Power BI in data analysis. (CO3,K1) 2
- (2.4) Describe focus mode in Power BI reports. (CO4,K2) 2
- (2.5) Explain the concept of goals in Google Analytics. (CO5,K2) 2

SECTION-B

30

Answer any one of the following:-

- (3.1) Differentiate between VLOOKUP and HLOOKUP with examples. (CO1,K2) 6
- (3.2) Repeated ranges are used in formulas in a worksheet. Describe how to make and utilize a defined name.. (CO1,K3) 6

Answer any one of the following:-

- (3.3) Explain the purpose of slicers in PivotTable. (CO2,K2) 6
- (3.4) Explain Scenario Manager with suitable example. (CO2,K2) 6

Answer any one of the following:-

- (3.5) Give a thorough explanation of Power BI's functionality and components. (CO3,K2) 6
- (3.6) Describe different types of visualizations used in Power BI with examples. (CO3,K2) 6

Answer any one of the following:-

- (3.7) Describe different types of filters used in Power BI reports. (CO4,K2) 6
- (3.8) Describe the concept of conditional filtering and its importance. (CO4,K2) 6

Answer any one of the following:-

- (3.9) Explain Google Analytics in detail along with its features and uses. (CO5,K2) 6
- (3.10) Describe the process of setting up Google Analytics for a website. (CO5,K2) 6

SECTION-C

50

4. Answer any one of the following:-

- (4.1) A financial dataset is given. Demonstrate PMT, PV, FV, and NPER functions with explanation. (CO1,K3) 10
- (4.2) Differentiate between SUM, SUMIF, and SUBTOTAL functions with examples. (CO1,K2) 10

5. Answer any one of the following:-

- (5.1) Describe formula auditing tools and their significance when using formulas in Excel. (CO2,K3) 10
- (5.2) Describe the process of recording a macro with steps. (CO2,K2) 10

6. Answer any one of the following:-

- (6.1) Explain report creation using database tables with suitable example. (CO3,K2) 10
- (6.2) Describe the process of loading and transforming data in Power BI. (CO3,K2) 10

7. Answer any one of the following:-

- (7.1) Explain the concept of Direct Query and its importance in real-time data access. (CO4,K2) 10
- (7.2) Demonstrate creation of map-based reports for location analysis. (CO4,K3) 10

8. Answer any one of the following:-

- (8.1) Describe the various report formats that Google Analytics offers.. (CO5,K2) 10
- (8.2) Explain the overall workflow of tracking, analyzing, and reporting website data. (CO5,K2) 10