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Gandhi Institute of Engineering and Technology University, Odisha, Gunupur
(GIET UNIVERSITY)

M.B.A. (Second Semester) Regular Examinations, May – 2026

25MBPC207- Business Analytics
(MBA)



Time: 3 hrs

Maximum: 60 Marks

(The figures in the right hand margin indicate marks.)

PART – A

(2 x 5 = 10 Marks)

Q.1. Answer **ALL** questions

	CO #	Blooms Level
a. What is meant by Business Analytics? How is it different from Business Analysis?	CO1	K1
b. Identify the key components of the DIKW Pyramid.	CO1	K1
c. What do you understand by the Data Value Chain? Why is it important?	CO2	K1
d. Mention any four data types used in R programming.	CO3	K1
e. What is the role of the readr package in R?	CO4	K1

PART – B

(10 x 5 = 50 Marks)

Answer **all** questions

	Marks	CO #	Blooms Level
2. a. Outline the roles of a Data Scientist, Data Engineer and Data Analyst with suitable examples.	5	CO1	K2
b. Explain the 5 V's of Big Data and state their relevance in Business Analytics.	5	CO1	K2
OR			
c. FreshMart, a retail company, is overwhelmed with data from multiple sources. Examine how it can apply Business Analytics practices, the DIKW framework, and data management strategies to derive actionable insights.	10	CO1	K4
3. a. Explain the concept of Data Architecture and its role in managing information effectively.	6	CO2	K2
b. Describe different decision-making structures and show how analytics contributes to business value.	4	CO2	K2
OR			
c. Discuss the key data management processes required for capturing relevant data and reducing decision time.	5	CO2	K3
d. Explain how organizations can connect analytics with value creation through effective information management.	5	CO2	K3
4. a. Explain the basic syntax of R with examples of variables, operators, and data types.	5	CO3	K2
b. Compare Vectors, Matrices, Lists, and Data Frames in R with suitable examples.	5	CO3	K3
OR			
c. Write an R program to create a Data Frame with at least four columns, handle missing values, and apply a user-defined function. Explain each step.	6	CO3	K3
d. Explain the use of Factors and Date/Time handling in R. Also, state the key limitations of R.	4	CO3	K2

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| 5. a. | Illustrate how CSV, Excel, and JSON files are imported into R using appropriate packages, with code snippets. | 6 | CO4 | K3 |
| b. | Describe the main functions of the dplyr package for data manipulation. | 4 | CO4 | K2 |
| OR | | | | |
| c. | Demonstrate how data can be retrieved from XML and web sources in R with sample code. | 5 | CO4 | K3 |
| d. | Explain the process of importing and exporting data in R using the readr package. Also, state the importance of binary file handling. | 5 | CO4 | K2 |
| 6. a. | Explain the importance of data visualization and the principles for selecting appropriate visual representations. | 5 | CO5 | K2 |
| b. | Write R code to create a Bar Chart and a Pie Chart. State suitable use cases for each. | 5 | CO5 | K3 |
| OR | | | | |
| c. | A hospital wants to analyze monthly patient admissions. Recommend suitable visualization techniques (Histogram, Line Graph, Boxplot, Scatterplot) for different data aspects. Justify your choices and provide sample R code. | 10 | CO5 | K5 |

End of Paper