Avinashilingam Institute for Home Science and Higher Education for Women

(Deemed to be University Estd. u/s 3 of UGC Act 1956, Category 'A' by MHRD)[now MoE]
Re-accredited with 'A++' Grade by NAAC CGPA 3.65/4, Category I by UGC
Coimbatore - 641 043, Tamil Nadu, India

Continuous Internal Assessment Test - I February 2026

VI Semester

Class : III UG (2019 & 2022 Repeaters) **Time : 2 Hours**

Major: Computer Applications **Maximum Marks: 60**

18BCAC29/21BCAC29 Data Analytics and Business Intelligence

Course Outcomes:

At the end of the course, students will:

1. Analyze and explore the applications of data analytics.
2. Apply statistical techniques for data analysis.
3. Discover interesting patterns using data mining techniques.
4. Acquire knowledge on Business Intelligence through Data Mining.
5. Recommend suitable business intelligence tool for industry related problems.

Part – A **6x 1=6**

Choose the Correct Answer

1. The one which is not a data analysis process is_____. CO1 K1
   a. Data mining b. text analytics c. predictive intelligence d. business intelligence
2. The main focus of Data Transformation Testing in ETL is _____. CO1 K1
   a. Testing the extraction process
   b. Verifying that data is correctly transformed according to business rules
   c. Checking the loading speed of data
   d. Validating the data warehouse schema
3. Data Analytics uses _____to get insights from data. CO2 K1
   a. Statistical figures b. Numerical aspects c. Statistical methods d. mathematical models
4. The learner is trying to predict housing prices based on the size of each house. What type of regression is this? CO2 K1
   a. Multivariate Logistic Regression b. Logistic Regression
   c. Linear Regression d. Multivariate Linear Regression
5. Which is not a data cleaning step? CO3 K1
   a. To add the noisy data b. removing duplicates
   c. Correct the inconsistencies in data d. handling missing values
6. The data warehousing support _____. CO3 K1
   a. OLAP b. OLAP & OLTP c. OLTP d. operational database

Part – B **3 x 6=18**

Answer ALL Questions

Each answer should not exceed 400 words or two pages

7.a. Discuss on the four types of Analytics using a diagram: CO1 K2
(i) Descriptive (ii) Diagnostic (iii) Predictive (iv) Prescriptive

(or)

7.b. Write a note on the characteristics of big data analytics. CO1 K1

8.a. Write anote on the statistical and mathematical models of data analytics. CO2 K1

(or)

8.b. Write a note on how descriptive models can be built. CO2 K2

9.a. Distinguish between OLTP and Data Warehouses. CO3 K2

(or)

9.b. Write short notes on cross validation. CO2 K1

Part - C **3 x 12 =36**

Answer ALL Questions

Each answer should not exceed 800 words or four pages

10.a. Discuss in detail the techniques to extract, clean, analyze, store and transform data. CO1 K2

(or)

10.b. Explain in brief about: Real Time, in-database, in-memory, dynamic and cloud Analytics. CO1 K2

11.a. Explain how predictive models can be build. CO2 K2

(or)

11.b. Discuss linear and non-linear regression in predictive models. CO2 K2

12.a. Describe in detail about Data Warehousing Architecture with neat diagram. CO3 K2

(or)

12.b. Explain in detail on Gaussians Maximum likelihood function.