PRESIDENCY UNIVERSITY

BENGALURU

End - Term Examinations – MAY/ JUNE 2025

Date: 02-06-2025   **Time:** 01:00 pm – 04:00 pm

School: SOCSE	Program: B. Tech-CSD/CSG	
Course Code: CSE3088	Course Name: Business Intelligence and Analytics	
Semester: IV	Max Marks: 100	Weightage: 50%

CO - Levels	CO1	CO2	CO3	CO4	CO5
Marks	19	19	31	31	

Instructions:

(i) *Read all questions carefully and answer accordingly.*

(ii) *Do not write anything on the question paper other than roll number.*

Part A

Answer ALL the Questions. Each question carries 2marks.   **10Q x 2M=20M**

1.	List four major components of BI architecture.	2 Marks	L1	CO1
2.	Define business analytics.	2 Marks	L1	CO1
3.	Define a business report	2 Marks	L1	CO2
4.	Define formal and informal reports.	2 Marks	L1	CO2
5.	How Hadoop offers fault tolerance?	2 Marks	L1	CO3
6.	Define horizontal scalability.	2 Marks	L1	CO3
7.	NoSQL databases uses BASE model (Basically Available, Soft state, eventually consistent), define what is mean by "eventually consistent "?	2 Marks	L1	CO3
8.	Define Location Intelligence.	2 Marks	L1	CO4
9.	Define collaborative filtering.	2 Marks	L1	CO4
10.	What is DaaS (Data as a Service)?	2 Marks	L1	CO4

Part B

Answer the Questions.   **Total Marks 80M**

11.	a.	What is BI governance? Explain its three pillars.	10 Marks	L2	CO1
		Or			

12.	a.	Draw the diagram of BI infrastructure? Explain, what are data sources, ETL, BI tools and visualization platforms.	10 Marks	L2	CO1
13.	a.	Explain the three essential layers of information in a well-designed dashboard.	10 Marks	L2	CO2
		Or			
14.	a.	Explain the following best practices of dashboard design. **(i)** Wrap the Dashboard Metrics with Contextual Metadata. **(ii)** Validate the Dashboard Design by a Usability Specialist.	10 Marks	L2	CO2
15.	a.	"Netflix leverages the potentials of big data analytics for providing personalized recommendations to its users", justify this statement.	10 Marks	L2	CO3
		Or			
16.	a.	Explain how Hadoop ecosystem works?	10 Marks	L2	CO3
17.	a.	Describe, how content-based filtering works? What are its advantages?	10 Marks	L2	CO4
		Or			
18.	a.	Discuss, how DaaS and AaaS helps with business intelligence activities.	10 Marks	L2	CO4
19.	a.	Suppose we have to count the occurrence of each unique word from the text: Dear, Bear, River, Car, Car, River, Deer, Car and Bear Apply MapReduce to solve this problem. Show each step.	15 Marks	L3	CO3
	b.	Differentiate OLAP and OLTP on the basis of the following factors: data source, purpose, volume of data, processing time and normalization.	5 Marks	L2	CO1
		Or			
20.	a.	Demonstrate the characteristics of data streams. By applying stream analytics how logistics companies can plan for efficiently routing the delivery trucks from point A to point B.	15 Marks	L3	CO3
	b.	Explain the 5 Vs of big data.	5 Marks	L2	CO1
21.	a.	Use Amazon as a case for applying big data analytics for personalized recommendation to the customers, supply chain optimization and fraud detection	15 Marks	L3	CO4
	b.	Explain the distinguishing features of KPIs.	5 Marks	L2	CO2
		Or			
22.	a.	"Computers and analytics have transformed the way organizations operate" justify this statement by applying how analytics have impacted the way organization operates.	15 Marks	L3	CO4
	b.	What is six sigma used for? Briefly explain DMAIC performance model.	5 Marks	L2	CO2