SCHOOL COMPUTER SCIENCE AND ENGINEERING
CONTINUOUS ASSESSMENT TEST - I
WINTER SEMESTER 2024-2025

SLOT: C1 + TC1

Programme Name & Branch : B.Tech. & Computer Science (Core and Specialization)
Course Code and Course Name : BCSE318L & Data Privacy
Faculty Name(s) : Prof. ANBARASI M, Prof. UMADEVI K S, Prof. GLADYS GNANA KIRUBA B, Prof. SUDARSHAN NANDY, Prof. YOGANAND, Prof. THANGARAMYA K
Class Number(s) : VL2024250501576, 1565, 1719, 1580, 1604, 1607
Date of Examination : 29-01-2025
Exam Duration : 90 minutes   Maximum Marks: 50

General instruction(s):
- Answer All Questions

Q. No	Question	M	CO	BL
1.	a) Classify and describe the different types of identifiers for protecting sensitive data from in the given dataset.	5	1	2
	b) In a healthcare organization, data privacy is a complex issue with numerous stakeholders. Identify the key players, their roles and responsibilities in detail.	5		
2	You are asked to analyse the credit risk assessment of the loan applicants for ABC bank based on an extensive data of the loan applicants such as demographic information (age, income, occupation), financial history (credits score, loan history) and behavioural data (spending pattern, transaction history). Create the loan dataset with minimum of 5 records and convert it into anonymized dataset using above constraints and present the privacy gain and utility loss in the anonymized data. Also discuss the importance to balance between utility and privacy.	10	1	2
3.	Explain the various methods that do not supress values in the dataset, but alter the values to limit disclosure risk by creating uncertainty around the true values. Most of the methods are based on principles of matrix masking and also applied to both categorical and continuous datasets.	10	2	2
4.	a) A public health agency wants to release data on COVID-19 vaccination rates by zip code to inform public health initiatives. However, releasing the raw data could	5		

Dataset for Q1 a):

Name	Age	Gender	Blood Type	Date of Admi	Insurance Provider	Billing Amount	Medication	Test Results
Bobby Jackson	30	Male	B-	31-01-2024	Blue Cross	18856.28	Paracetamol	Normal
Leslie Terry	62	Male	A+	20-08-2019	Medicare	33643.33	Ibuprofen	Inconclusive
Danny Smith	76	Female	A-	22-09-2022	Aetna	27955.1	Aspirin	Normal
Andrew Watts	28	Female	O+	18-11-2020	Medicare	37909.78	Ibuprofen	Abnormal
Emily Johnson	36	Male	A+	20-12-2023	UnitedHealthcare	48145.11	Ibuprofen	Normal
Edward Edwards	21	Female	AB-	03-11-2020	Medicare	19580.87	Paracetamol	Inconclusive
Christina Martinez	20	Female	A+	28-12-2021	Cigna	45820.46	Paracetamol	Inconclusive