Sri Indu Institute of Engineering & Technology

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COURSE FILE

ON

DATA BASE MANAGEMENT SYSTEM

Course Code - CS404PC

II B.Tech II-SEMESTER

A.Y.: 2022-2023

Prepared by

Mrs.D. RAJESHWARI
Assistant Professor

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PRINCIPAL
Sri Indu Institute of Engineering & Tech.
Sheriguda(Vill), Ibrahimpatnam
R.R. Dist. Telangana-501 510.

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

Academic Year	2022-2023
Course Title	DATABASE MANAGEMENT SYSTEM
Course Code	CS 404PC
Programme	B.Tech
Year & Semester	II year II-semester
Branch & Section	CSE-A
Regulation	R18
Course Faculty	Mrs. D.RAJESHWARI, Assistant Professor

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DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

INSTITUTE VISION AND MISSION

Vision:

To become a premier institute of academic excellence by providing the world class education that transforms individuals into high intellectuals, by evolving them as empathetic and responsible citizens through continuous improvement.

Mission:

IM1: To offer outcome-based education and enhancement of technical and practical skills.

IM2: To continuous assess of teaching-learning process through institute-industry collaboration..

IM3: To be a centre of excellence for innovative and emerging fields in technology development with state-of-art facilities to faculty and students fraternity.

IM4: To create an enterprising environment to ensure culture, ethics and social responsibility among the stakeholders

B. Rahul Kanth
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DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

DEPARTMENT VISION AND MISSION

Vision:

To become a prominent knowledge hub for learners, strive for educational excellence with innovative and industrial techniques so as to meet the global needs.

Mission:

DM1 : To provide ambience that enhances innovations, problem solving skills, leadership qualities, decision making, team-spirit and ethical responsibilities.

DM2 : To impart quality education with professional and personal ethics, so as to meet the challenging technological needs of the industry and society.

DM3 : To provide academic infrastructure and develop linkage with the world class organizations to strengthen industry-academia relationships for learners.

DM4 : To provide and strengthen new concepts of research in the thrust area of Computer Science and Engineering to reach the needs of Government and Society.

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DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

PROGRAM EDUCATIONAL OBJECTIVES

PEO1: To develop trained graduates with strong academic and technical skills of modern computer science and engineering.

PEO2: To promote trained graduates with leadership qualities and the ability to solve real time problems using current techniques and tools in interdisciplinary environment.

PEO3: To motivate the graduates towards lifelong learning through continuing education and professional development.

PROGRAM SPECIFIC OUTCOMES

PSO1 : **Professional Skills:** To implement computer programs of varying complexity in the areas related to Web Design, Cloud Computing, Network Security and Artificial Intelligence.

PSO2: **Problem-Solving Skills**: To develop quality products using open ended programming environment.

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PROGRAMME OUTCOMES (POs)

PO1: **Engineering knowledge:** Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.

PO2: **Problem analysis:** Identify, formulate, review research literature, and analyse complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.

PO3: **Design/development of solutions:**Design solutions for complex engineering problems and design system components or processes that meet the specified needs with appropriate consideration for the public health and safety, and the cultural, societal, and environmental considerations.

PO4: **Conduct investigations of complex problems:** Use research-based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of the information to provide valid conclusions.

PO5: **Modern tool usage:** Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools including prediction and modelling to complex engineering activities with an understanding of the limitations.

PO6: **The engineer and society:** Apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to the professional engineering practice.

PO7: **Environment and sustainability:** Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.

PO8: **Ethics:** Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.

PO9: **Individual and team work:** Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.

PO10: **Communication:** Communicate effectively on complex engineering activities with the engineering community and with society at large, such as, being able to comprehend and write effective reports and design documentation, make effective presentations, and give and receive clear instructions.

PO11: **Project management and finance:** Demonstrate knowledge and understanding of the engineering and management principles and apply these to one's own work, as a member and leader in a team, to manage projects and in multidisciplinary environments.

PO12: **Life-long learning:** Recognize the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change.

JAWAHARLALNEHRUTECHNOLOGICALUNIVERSITYHYDERABAD

B.Tech.inCOMPUTERSCIENCEANDENGINEERING
COURSESTRUCTURE&SYLLABUS(R18)
ApplicableFrom2018-19 Admitted Batch

II YEAR ISEMESTER

S.No.	Course Code	CourseTitle	L	T	P	Credits
1	CS301ES	AnalogandDigitalElectronics	3	0	0	3
2	CS302PC	DataStructures	3	1	0	4
3	MA303BS	ComputerOrientedStatisticalMethods	3	1	0	4
4	CS304PC	ComputerOrganizationandArchitecture	3	0	0	3
5	CS305PC	ObjectOrientedProgrammingusingC++	2	0	0	2
6	CS306ES	AnalogandDigitalElectronicsLab	0	0	2	1
7	CS307PC	DataStructuresLab	0	0	3	1.5
8	CS308PC	ITWorkshopLab	0	0	3	1.5
9	CS309PC	C++ProgrammingLab	0	0	2	1
10	*MC309	GenderSensitizationLab	0	0	2	0
		TotalCredits	**14**	**2**	**12**	**21**

II YEARIISEMESTER

S.No.	Course Code	CourseTitle	L	T	P	Credits
1	CS401PC	DiscreteMathematics	3	0	0	3
2	SM402MS	BusinessEconomics&FinancialAnalysis	3	0	0	3
3	CS403PC	OperatingSystems	3	0	0	3
4	CS404PC	DatabaseManagementSystems	3	1	0	4
5	CS405PC	JavaProgramming	3	1	0	4
6	CS406PC	OperatingSystemsLab	0	0	3	1.5
7	CS407PC	DatabaseManagementSystemsLab	0	0	3	1.5
8	CS408PC	JavaProgrammingLab	0	0	2	1
9	*MC409	ConstitutionofIndia	3	0	0	0
		TotalCredits	**18**	**2**	**8**	**21**

CS404PC: DATABASEMANAGEMENTSYSTEMS

B.TECH II Year II Sem. **L T P C**
3 1 0 4

Prerequisites: Acourseon"DataStructures".

CourseObjectives:

- Tounderstandthebasicconceptsandtheapplicationsofdatabasesystems.
- TomasterthebasicsofSQLandconstructqueriesusing SQL.
- Topicsinclude datamodels, database design, relational model,relational algebra, transaction control, concurrency control, storage structures and access techniques.

CourseOutcomes:

- Gainknowledgeoffundamentalsof DBMS,databasedesignandnormalforms
- MasterthebasicsofSQLforretrievalandmanagementofdata.
- Beacquaintedwiththebasicsoftransactionprocessingandconcurrencycontrol.
- Familiaritywithdatabasestoragestructuresandaccesstechniques

UNIT-I

Database System Applications: A Historical Perspective, File Systems versus a DBMS**,** the Data Model, Levels of Abstraction in a DBMS, Data Independence, Structure of a DBMS

IntroductiontoDatabaseDesign:DatabaseDesignandERDiagrams,Entities,Attributes,andEntity Sets, Relationships and Relationship Sets, Additional Features of the ER Model, Conceptual Design With the ER Model

UNIT-II

Introduction to the Relational Model: Integrity constraint over relations, enforcing integrity constraints,queryingrelationaldata,logicaldatabasedesign,introductiontoviews,destroying/altering tables and views.

RelationalAlgebra**,**TuplerelationalCalculus,DomainrelationalCalculus.

UNIT-III

SQL:QUERIES,CONSTRAINTS,TRIGGERS:formofbasicSQLquery,UNION,INTERSECT,and EXCEPT, NestedQueries, aggregationoperators, NULLvalues, complex integrity constraintsinSQL, triggers and active data bases.

Schema Refinement: Problems caused by redundancy, decompositions, problems related to decomposition, reasoning about functional dependencies, FIRST, SECOND, THIRD normal forms, BCNF, losslessjoin decomposition,multi-valued dependencies, FOURTH normal form,FIFTH normal form.

UNIT-IV

Transaction Concept, Transaction State, Implementation of Atomicity and Durability, Concurrent Executions, Serializability, Recoverability, Implementation of Isolation, Testing for serializability, Lock Based Protocols, Timestamp Based Protocols, Validation- Based Protocols, Multiple Granularity, Recovery and Atomicity, Log–Based Recovery, Recovery with Concurrent Transactions.

UNIT-V

Data on External Storage, File Organization and Indexing, Cluster Indexes, Primary and Secondary Indexes, Index data Structures, Hash Based Indexing, Tree base Indexing, Comparison of File Organizations, Indexes and Performance Tuning, Intuitions for tree Indexes, Indexed Sequential Access Methods (ISAM), B+ Trees: A Dynamic Index Structure.

TEXTBOOKS:

1. DatabaseManagementSystems,RaghuramaKrishnan,JohannesGehrke,*TataMcGrawHill* 3rdEdition
2. DatabaseSystemConcepts,Silberschatz,Korth,*McGrawhill*,Vedition.

REFERENCEBOOKS:

1. DatabaseSystemsdesign,Implementation,andManagement,PeterRob&CarlosCoronel7th Edition.
2. FundamentalsofDatabaseSystems,ElmasriNavrate,*PearsonEducation*
3. IntroductiontoDatabaseSystems,C.J.Date,*PearsonEducation*
4. OracleforProfessionals,TheXTeam,S.ShahandV.Shah, *SPD*.
5. DatabaseSystemsUsingOracle:ASimplifiedguidetoSQLandPL/SQL,Shah,*PHI*.
6. FundamentalsofDatabaseManagementSystems,M.L.Gillenson,*WileyStudent*Edition.

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COURSE OUTCOMES

Course: Database Management Systems (C224) **Class: II – CSE-A - Section**

After completing this course the student will be able to:

C224.1 Identify and understand the underlying concepts of database techniques and query a database using DML/DDL commands (Knowledge).

C224.2 Explain the concepts of relational data model, entity-relationship model and relational database design (Comprehension)

C224.3 Define relational algebra and calculus, understands the use of sql and learns sql syntax (Knowledge)

C224.4 Develop and improve database design by normalization(Synthesis)

C224.5 Define transaction and understand its properties. Learns techniques for controlling the consequences of concurrent data access.(Knowledge)

C224.6 Describe basic database storage structures and access techniques: file and page organizations, index methods including B-tree and Hashing (Knowledge)

Mapping of course outcomes with program outcomes:

High -3 Medium -2 Low-1

PO/PSO/ CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
C224.1	-	3	2	-	1	-	-	-	-	-	-	-	-	-
C224.2	-	2	3	1		-	-	-	-	-	-	-	-	-
C224.3	3	-	-	-	-	-	-	-	-	-	-	2	-	-
C224.4	-	2	3	1	-	-	-	-	-	-	-	-	-	2
C224.5	2	-	3	-	-	-	1	-	-	-	-	-	-	2
C224.6	2	-	-	-	3	-	-	-	-	-	-	-	-	-
AVG	2.3	2.3	2.75	1	2	-	1	-	-	-	-	2	-	-

COURSE OUTCOMES

CO – PO / PSO Mapping Justification

CO – PO / PSO Mapping Justification

Course: DATABASE MANAGEMENT SYSTEMS (C222) Class: II– IISEM- CSE-A-

Section

PO1 **Engineering knowledge:** Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.

PO2 **Problem analysis:** Identify, formulate, review research literature, and analyse complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.

PO3 **Design/development of solutions:**Design solutions for complex engineering problems and design system components or processes that meet the specified needs with appropriate consideration for the public health and safety, and the cultural, societal, and environmental considerations.

PO4 **Conduct investigations of complex problems:** Use research-based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of the information to provide valid conclusions.

PO5 **Modern tool usage:** Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools including prediction and modelling to complex engineering activities with an understanding of the limitations.

PO7 **Environment and sustainability:** Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.

PO12 **Life-long learning:** Recognize the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change

PROGRAM SPECIFIC OUTCOMES(PSOs):

PSO2 **Problem-Solving Skills:** The ability to develop quality products using open ended programming environment.

C224.1 Identify and understand the underlying concepts of database techniques and query a database using DML/DDL commands (Knowledge).

	Justification
PO2	Ability to analyse and apply database techniques to reach sustained conclusions.(Level 3)
PO3	Design the application with specified needs and appropiate considerations. (Level 2)
PO5	Ability to select appropiate commands to query the database for the required results. (Level 1)

C224.2 Explain the concepts of relational data model,entity-relationship model and relational database design (Comprehension)

	Justification
PO2	Analyze the effectiviness of relational data model.(Level 2)
PO3	Students will able to design the ER diagrams.(Level 3)
PO4	Ability to design the relational database.(Level 1)

C224.3 Define relational algebra and calculus, understands the use of sql and learns sql syntax (Knowledge)

PO1	Gains knowledge of formal SQL languages.(Level 3)
PO12	Recognize the need for life long learning of sql so as to indulge in the broadest context of technological changes.(Level 2)

C224.4 Develop and improve database design by normalization(Synthesis)

	Justification
PO2	Analyze the effectivness of Normalization in database design. (Level 2)
PO3	Ability to design database that meets specified needs by applying various normalization techniques. (Level 3)
PO4	Analyze the data given and organize them appropiately with gained knowledge.(Level 1)
PSO2	Ability to apply normazliation techniques to enhance the quality of database.(Level 2)

C224.5 Define transaction and understand its properties. Learns techniques for controlling the consequences of concurrent data access.(Knowledge)

	Justification
PO1	Gains specialized knowledge in Transactions. (Level 2)
PO3	Recognizes the various properties of Transactions.(Level 3)
PO7	Understands the impact and need of concurrency control in any transction .(Level 1)
PSO1	Enables to solve the problems associated with transactions using techniques like concurrency control.(Level 2)

C224.6 Describe basic database storage structures and access techniques: file and page organizations, index methods including B-tree and Hashing (Knowledge)

	Justification
PO1	Gains knowledge on various database storage structures and access techniques.(Level 2)
PO5	Ability to apply appropriate techniques to store and retrieve information from database. (Level 3)

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD

ACADEMIC CALENDAR 2022-23

B. Tech./B.Pharm. II YEAR I & II SEMESTERS

I SEM

S. No	Description	Duration	
		From	To
1	Commencement of I Semester classwork	**28.11.2022**	
2	1st Spell of Instructions	28.11.2022	21.01.2023 (8 Weeks)
3	First Mid Term Examinations	23.01.2023	30.01.2023 (1 Week)
4	Submission of First Mid Term Exam Marks to the University on or before	04.02.2023	
5	2nd Spell of Instructions	31.01.2023	29.03.2023 (8 Weeks)
6	Second Mid Term Examinations	31.03.2023	08.04.2023 (1 Week)
7	Preparation Holidays and Practical Examinations	10.04.2023	15.04.2023 (1 Week)
8	Submission of Second Mid Term Exam Marks to the University on or before	15.04.2023	
9	End Semester Examinations	17.04.2023	29.04.2023 (2 Weeks)

Note: No. of Working / Instructional Days: 93

II SEM

S. No	Description	Duration	
		From	To
1	Commencement of II Semester classwork	**01.05.2023**	
2	1st Spell of Instructions (including Summer Vacation)	01.05.2023	08.07.2023 (10 Weeks)
3	**Summer Vacation**	15.05.2023	27.05.2023 (2 Weeks)
4	First Mid Term Examinations	10.07.2023	15.07.2023 (1 Week)
5	Submission of First Mid Term Exam Marks to the University on or before	22.07.2023	
6	2nd Spell of Instructions	18.07.2023	11.09.2023 (8 Weeks)
7	Second Mid Term Examinations	12.09.2023	16.09.2023 (1 Week)
8	Preparation Holidays and Practical Examinations	19.09.2023	23.09.2023 (1 Week)
9	Submission of Second Mid Term Exam Marks to the University on or before	23.09.2023	
10	End Semester Examinations	25.09.2023	07.10.2023 (2 Weeks)

Note: No. of Working / Instructional Days: 92

24/11/22

REGISTRAR

SRI INDU INSTITUTE OF ENGINEERING AND TECHNOLOGY

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TIME TABLE FOR A.Y 2022-23

Class: II-B. Tech CSE -A **Semester: II** **LH. NO: A-301** **W.E.F:1-05-2023**

Period/ Day	1	2	3	4	1:00-1:30	5	6	7
	9:40-10:30	10:30-11:20	11:20-12:10	12:10-1:00		1:30-2:20	2:20-3:10	3:10-4:00
Monday	DM	JAVALAB(BATCH-I) / DBMS LAB(BATCH-II)				COI	JAVA	DBMS
Tuesday	OS	DBMS/JAVA(T)	LIB	DBMS		COI	CO-C/SS/DAA	
Wednesday	JAVA	OS	DBMS	BEFA	LUNCH	DBMS LAB(BATCH-I) /OS LAB (BATCH-II)		
Thursday	DM	COUN	BEFA	DM		OS	DBMS	BEFA
Friday	COI	INT	OS	JAVA/DBMS(T)		JAVA	BEFA	SPORTS
Saturday	DBMS	DM	JAVA	OS		OS LAB (BATCH-I) / JAVALAB(BATCH-II)		

SubjectCode	Subject Name	Name of the Faculty	Subject Code	Subject Name	Name of the Faculty
CS401PC	Discrete Mathematics	Dr.E.Naga Ratnam	CS405PC	Java Programming	Mrs B.S .Swapna Shanti
SM402MS	Business Economics & Financial Analysis	Mr.U P Bharadwaja	CS406PC	Operating Systems Lab	Mrs T.Ramya Priya/ Mrs P.Sowjanya/ Mr.Veera kishore K
CS403PC	Operating Systems	Mrs T.Ramya Priya	CS407PC Lab	Database Management Systems	Mrs D. Rajeswari/ V. Divya/ Mr A Vijay Kumar
CS404PC	Database Management Systems	Mrs D. Rajeswari	CS408PC	Java Programming Lab	Mrs B.S .Swapna Shanti/ Mrs.R.Padma/ Mrs R Ganga
	CO-C/SS/DAA	Mrs B.S .Swapna Shanti	MC409	Constitution of India	Mrs K Laxmi Shilpa
Sports	Sports	Mr.P Sreeramulu	LIB	Library	Mrs T.Ramya Priya
Internet	Internet	Mr D Nagaraju	COUN	Counselling	Mrs T.Ramya Priya
Class In-Charge : Mrs D. Rajeswari		Mentor 1 : Mrs D. Rajeswari		Mentor 2: Mrs B.S .Swapna Shanti	

Class In-Charge

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Department Computer Science and Engineering
2022-23; 2nd semester

Course Title	DATABASE MANAGEMENT SYSTEM
Course Code	CS404PC
Programme	B.Tech
Year & Semester	II-Year II-Semester
Regulation	R18
Course Faculty	Mrs.D.Rajeshwari, Assistant Professor, CSE

LESSON PLAN

S.NO	Unit	TOPIC	Number of Sessions Planned	Teaching method/Aids	REFERENCE
1.	1	**Introduction** :Database System Applications, Purpose of Database Systems	1	Black Board	T2
2.		View of Data, Database Languages – DDL, DML	1	Black Board	T2
3.		Relational Databases, Database Design	1	Black Board	T2
4.		Data Storage and Querying, Transaction Management	1	Black Board	T2
5.		Database Architecture	1	Black Board	T2
6.		Data Mining and Information Retrieval	1	Black Board	T2
7.		Specialty Databases, Database Users and Administrators	1	Black Board	T2
8.		History of Database Systems.	1	Black Board	T2
9.		**Introduction To Database**	1	Black Board	T1

		Design: Database Design and ER diagrams, Entities, Attributes and Entity sets			
10.		Relationships and Relationship sets	1	Black Board	T1
11.		Additional features of ER Model	1	Black BoarD	T1
12.		Conceptual Design with the ER Model, Conceptual Design for Large enterprises	1	Black Board	T1
13.		Introduction to the Relational Model	1	Black Board	T1
14.		Integrity Constraints over Relations	1	Black Board	T1
15.		Enforcing Integrity constraints, Querying relational data	1	Black Board	T1
16.		Logical data base Design: ER to Relational	1	Black Board	T1
17.		Introduction to Views, Destroying /Altering Tables and Views.	1	Black Board	T1
18.	**2**	**Relational Algebra And Calculus**: Preliminaries, Relational Algebra	1	Black Board	T1
19.		Relational calculus-Tuple Relational calculus	1	PPT	T1
20.		Domain relational calculus	1	Black Board	T1
21.		Expressive Power of Algebra and calculus	1	Black Board	T1
22.		Queries,Constraints,Triggers-Form of Basic SQL Query	1	Black Board	T1
23.		UNION,INTERSECT,and EXCEPT	1	Black Board	T1
24.		Nested Queries,NULL values Complex Integrity	1	Black Board	T1
25.		Constraints in SQL,Triggers and Active Data bases	1	Black Board	T1
26.		Designing Active Databases..	1	Black Board	T1
27.	**3**	**Schema Refinement and Normal Forms** :Introduction to Schema Refinement	1	Black Board	T1
28.		Functional Dependencies-Reasoning about FDs, Normal Forms	1	Black Board	T1
29.		Properties of Decompositions	1	PPT	T1
30.		Normalization, Schema	1	Black Board	T1
31.		Refinement in Database Design	1	Black Board	T1

32.		Other Kinds of Dependencies	1	Black Board	T1
33.		**Transaction Management** : Transactions ,Transaction Concept	1	Black Board	T1,T2
34.		Simple Transaction Model, Storage Structure	1	Black Board	T1,T2
35.		Transaction Atomicity and Durability, Transaction Isolation	1	Black Board	T1,T2
36.		Serializability	1	Black Board	T1,T2
37.		Transaction Isolation and Atomicity Transaction Isolation Levels	1	Black Board	T1,T2
38.		Implementation of Isolation Levels.	1	Black Board	T1,T2
39.		**Concurrency Control:** Lock–Based Protocols	1	Black Board	T1
40.		Multiple Granularity	1	Black Board	T1
41.		Timestamp-Based,	1	Black Board	T1
42.	**4**	Protocols, Validation-Based Protocols, Multiversion Schemes.	1	Black Board	T1
43.		Recovery System-Failure Classification, Storage, Recovery and Atomicity, Recovery Algorithm, Buffer Management,	1	Black Board	T1
44.		Failure with loss of nonvolatile storage,	1	Black Board	T1,W1
45.		Early Lock Release and Logical Undo Operations, Remote Backup systems	1	Black Board	T1
46.		**Storage and Indexing:** Overview of Storage and Indexing: Data on External Storage.	1	PPT	T1
47.		FileOrganization and Indexing, , Index Data Structures	1	Black Board	T1
48.		Comparison of File Organizations	1	Black Board	T1
49.	**5**	Tree-Structured Indexing: Intuition for tree Indexes,	1	Black Board	T1
50.		Indexed Sequential Access Method	1	Black Board	T1
51.		(ISAM), B+ Trees: A Dynamic Index Structure, Search, Insert, Delete.	1	Black Board	T1
52.		**Hash- Based Indexing:** Static Hashing.	1	Black Board	T1,W1

53.		Extendible hashing, Linear Hashing, Extendible vs. Linear Hashing.	1	Black Board	T1

TEXT BOOKS:

1. Data base Management Systems, Raghu Ramakrishnan, Johannes Gehrke, McGraw Hill Education (India) Private Limited, 3rd Edition. (Part of UNIT-I, UNIT-II, UNIT-III, UNIT-V)
2. Data base System Concepts, A. Silberschatz, Henry. F. Korth, S. Sudarshan, McGraw Hill Education(India) Private Limited l, 6th edition.(Part of UNIT-I, UNIT-IV)

REFERENCE BOOKS:

1. Database Systems, 6th edition, R Elmasri, Shamkant B.Navathe, Pearson Education.
2. Database System Concepts, Peter Rob & Carlos Coronel, Cengage Learning.
3. Introduction to Database Management, M. L. Gillenson and others, Wiley Student Edition.
4. Database Development and Management, Lee Chao, Auerbach publications, Taylor & Francis Group
5. Introduction to Database Systems, C. J. Date, Pearson Education.

WEB REFERENCES

1. https://www.geeksforgeeks.org/dbms/
2. https://www.javatpoint.com/dbms-tutorial
3. WR3 www.guru99.com
4. https://www.w3schools.com/mysql/mysql_rdbms.asp
5. https://www.youtube.com/watch?v=OWX4RvijwLw
6. https://www.youtube.com/watch?v=w1XdPholzWY

LECTURE NOTES

Unit 1 link:
https://drive.google.com/file/d/1p3oJM75MqvjTpnlpj0WfeE_ma3Fr--M5/view?usp=sharing

Unit 2 link:
https://drive.google.com/file/d/1kilraSK2bEPgP3mkuvNkp-HYH62oo6zH/view?usp=sharing

Unit 3 link:
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Unit 4 link:

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Unit 5 link:

https://drive.google.com/file/d/1YNOIjEp5V4vgRzBRxxIijaKtQANHeJs2/view?usp=sharing

POWER POINT PRESENTATION

PPT link:

Unit-1

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Unit-2

https://drive.google.com/file/d/1L1KBbEYfZg98A9f_ql0ISg677ueTA141/view?usp=sharing

Unit-3

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Unit-4

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Unit-5

https://drive.google.com/file/d/1VCN8oFl5pE9S7C_g5sed8sp9eNrtEcId/view?usp=sharing

R18

Code No: 154AM

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD

B. Tech II Year II Semester Examinations, August/September - 2021

DATABASE MANAGEMENT SYSTEMS

(Common to CSE, IT, ITE)

Time: 3 Hours **Max. Marks: 75**

Answer any five questions All questions carry equal marks

\- - -

1.a) Discuss about levels of abstraction in a DBMS.
b) What is a data model? What are the different data models? Explain. [7+8]

2.a) Define ER model and explain the following kinds of constraints that can be specified in the ER diagram, and give an example of each: i) key constraint ii) participation constraint.
b) Discuss the functionality of query evaluation engine. [8+7]

3.a) Discuss in detail about the properties of relation algebra.
b) Compare tuple relational calculus and domain relational calculus. [7+8]

4. Consider the following relationsSailors (sid, sname, rating, age) Boats (bid, bname, color) Reserves (sid, bid, day)
Write the statements in Relational Algebra, Relational Calculus, Domain Relational Calculus and SQL for the following questions.
a) Find the names of sailors who have reserved a Red boat.
b) Find the names of sailors who have reserved at least one boat.
c) Find the names of sailors who have reserved a Red and a Green boat.
d) Find the names of sailors who have reserved a Red or a White boat.
e) Find the names of sailors who have reserved all boats. [15]

5.a) What are the steps to be followed to convert a relation in 3NF to BCNF?
b) Discuss the importance of entity integrity and referential integrity constraints. [8+7]

6.a) When is the decomposition of a relation schema R into two relation schemas X and Y said to be lossless-join decomposition? Why is this property so important? Give a necessary and sufficient condition to test whether a decomposition is lossless-join.
b) Discuss fourth normal form with illustration. [8+7]

7.a) Discuss in detail about timestamp based concurrency control techniques.
b) Write about Log based recovery. [8+7]

8.a) State and explain various file organization methods. Give suitable examples to each ofthem.
b) What are the Pros and Cons of ISAM? [8+7]

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Code No: 154AM **R18**

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD

B. Tech II Year II Semester Examinations, August/September - 2021
DATABASE MANAGEMENT SYSTEMS

(Common to CSE, IT, ITE)

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Code No: 154AM **R18**

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD

B. Tech II Year II Semester Examinations, March - 2022 DATABASE MANAGEMENT SYSTEMS

(Common to CSE, IT, ITE)

Time: 3 Hours **Max. Marks: 75**

Answer any five questions All questions carry equal marks

- - -

1. Explain any five applications of DBMS. [15]

2. What is Entity set and also define Relationship set. List and explain the symbols used to draw ER Diagram. [15]

3. What is a view? How to specify a view? Write about view implementation techniques. [15]

4. Discuss briefly about Domain relational calculus with suitable example. [15]

5. State 1NF, 2NF and 3NF and explain with examples. [15]

6. What is Functional Dependency? Explain types and properties of FD's. [15]

7. Discuss about transaction recovery techniques. [15]

8. Explain in detail about external hashing techniques. [15]

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Sri Indu Institute of Engineering & Technology

Sheriguda (V), Ibrahimpatnam (M), R.R.Dist-501 510

I- Mid Examinations, JULY-2023

Set – I

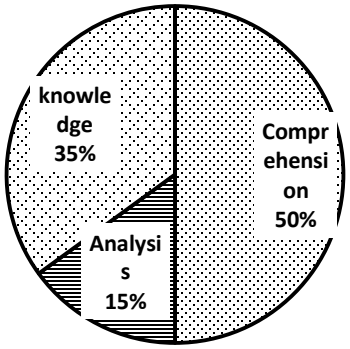
Year& Branch:II-CSE(A,B), AI&ML, AI&DS **Date:11-07-2023(AN)**

Subject:DATABASE MANAGEMENT SYSTEMS **Marks: 10** **Time: 60 min**

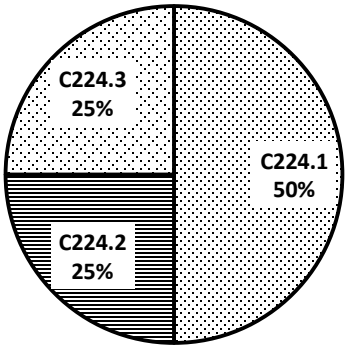
Answer any **TWO** Questions. All Question Carry Equal Marks 2*5=10 marks

1. Distinguish between File System and DBMS? And explain about data Independence in detail? **(5M)(C224.1)(Comprehension)**
2. Describe the conceptual design with ER model diagram? (**5M)(C224.1)(Knowledge)**
3. A) Differentiate between Relational Algebra and Relational Calculus? **(3M)(C224.2)(Anaylsis)**
   B) Describein detail about integrity constraints over relations? **(2M)(C224.2)(Knowledge)**
4. Illustrate the following operators in SQL with examples:
   i) UNION ii) INTERSECT iii)EXCEPT **(5M)(C224.3)(Comprehension)**

QUESTION PAPER MAPPING WITH BT'S



QUESTION PAPER MAPPING WITH CO'S



Sri Indu Institute of Engineering & Technology

Sheriguda (V), Ibrahimpatnam (M), R.R.Dist-501 510

I- Mid Examinations, JULY-2023

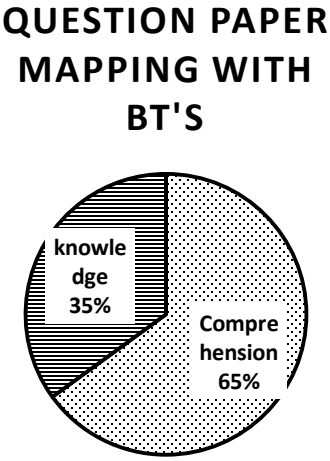
Set – II

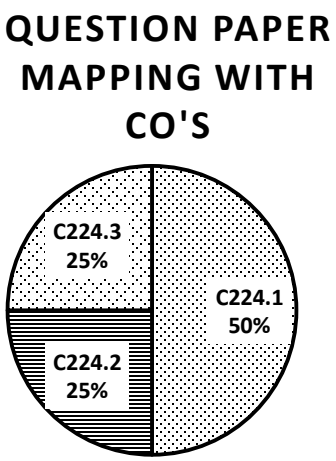
Year& Branch: II-CSE (A,B), AI&ML, AI&DS Date:11-07-2023(AN)

Subject: DATABASE MANAGEMENT SYSTEMS Marks: 10 Time: 60 min

Answer any **TWO** Questions. All Question Carry Equal Marks 2*5=10 marks

1. Describe in detail about structure of DBMS? **(5M)(C224.1)(Knowledge)**
2. Explain the Additional Features of ER model ? **(5M)(C224.1)(Comprehension)**
3. A)Define a view and explain briefly about Destroying/Altering views?
   (2M)(C224.2)(Knowledge)
   B) Explain about Integrity constraint over relations?
   (3M)(C224.2)(Comprehension)
4. Explain the following operators in SQL with examples:
   i) UNION ii) INTERSECT iii)EXCEPT
   (5M)(C224.3)(Comprehension)





Sri Indu Institute of Engineering & Technology

Sheriguda (V), Ibrahimpatnam (M), R.R.Dist-501 510

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

B.TECH. II YEAR II SEM I- Mid Term Examinations, JULY-2023

DATABASE MANAGEMENT SYSTEM

OBJECTIVE EXAM

NAME:_____ **H.NO:_____**

Answer all questions and all questions carry equal marks Time:20mins Marks:10

1. For each attribute of a relation, there is a set of permitted values, called the _____ of that attribute. [ ]
   a) Domain b) Relation c) Set d) Schema

2. Course (course_id,sec_id, semester)
   Here the course_id, sec_id and semester are _____ and course is a _____ [ ]
   a) Relations, Attribute b) Attributes, Relation c) Tuple,Relation d) Tuple, Attributes

3. A _____ integrity constraint requires that the values appearing in specified attributes of any tuple in the referencing relation also appear in specified attributes of at least one tuple in theReferencedrelation. [ ]
   a) Referential b) Referencing c) Specific d) Primary

4. The _____ operator takes the results of two queries and returns only rows that appear in both result sets. [ ]
   a) Union b) Intersect c) Difference d) Projection

5. The most commonly used operation in relational algebra for projecting a set of tuples from a relation is [ ]
   a) Join b) Projection c) Select d) Union

6. Which one of the following is a procedural language? [ ]
   a) Domainrelationalcalculus b) Tuplerelationalcalculus
   c) Relationalalgebra d) Query language

7. Here which of the following displays the unique values of the column? [ ]
   SELECT _____ dept_name
   FROM instructor;
   a) All b) Fromc) Distinct d) Name

8. _____is a set of one or more attributes taken collectively to uniquely identify a record. [ ]
   a) Primary Key b) Foreign key c) Super key d) Candidate key

9. _____ command is used to delete a table [ ]
   a) Delete b) Truncate c) Drop d) all of the above

10. _____operations do not preserve non-matched tuples. [ ]
    a) Left outer join b) Inner join c) Natural join d) Right outer join

Fill in the blanks (10*1/2=5marks)

11. Relational database consists of collection of_____

12. **SELECT***__FROM__ employee **WHERE**dept_name="Comp Sci";
    In the SQL given above there is an error. Identify the error_____

13. _____creates a virtual relation for storing the query.

14. _____ express the number of entities to which another entity can be associated via a relationship set.

15. Drop Table cannot be used to drop a table referenced by a _____ constraint.

16. _____ comparison operator in tuple relational calculus

17. The relationship set is represented in E-R diagram as_____

18. Aggregate functions are functions that take a _____ as input and return a single value.

19. We can test for the nonexistence of tuples in a subquery by using the _____ construct

20. SELECTemp_name
    FROM department
    WHEREdept_name**LIKE**' _____ Computer Science';
    Which symbol has to be added into the blank to select the dept_name which has Computer Science as its ending string?

Sri Indu Institute of Engineering & Technology

Sheriguda (V), Ibrahimpatnam (M), R.R.Dist-501 510

I- Mid Examinations, JULY-2023

Year &Branch: II CSE-A,B& C Time:60mins

Subject: **DATABASE MANAGEMENT SYSTEM** max marks:10 Date:11-07-2023(AN)

ANSWER KEY

Descriptive paper key link:

SET-1:

https://drive.google.com/file/d/1ZF0zB3baLDf4GbDIQAvKyJ2uYmTXqULO/view?usp=sharing

SET2:

https://drive.google.com/file/d/1xYeReyzwMdiuOybQvpZJmL5OWfe0tVe5/view?usp=sharing

DATABASE MANGEMENT SYSTEM
OBJECTIVE KEY

I. Choose the correct alternative:

1. B
2. A
3. B
4. C
5. C
6. C
7. C
8. C
9. B
10. Tables
11. "Comp Sci"
12. View
13. Mapping Cardinality
14. Foreign Key
15. <.>,<=,>=
16. Diamond
17. Collection of values
18. Exist
19. As
20. % -

Sri Indu Institute of Engineering & Technology

Sheriguda (V), Ibrahimpatnam (M), R.R.Dist-501 510

II- Mid Examinations, SEPTEMBER-2023

Set – I

Year & Branch: CSE A,B,C AIDS,AIML **Date: 13-09-2023**

Subject: DATABASE MANAGEMENT SYSTEMS **Marks: 10** **Time: 60 min**

Answer any **TWO** Questions. All Question Carry Equal Marks 2*5=10 marks

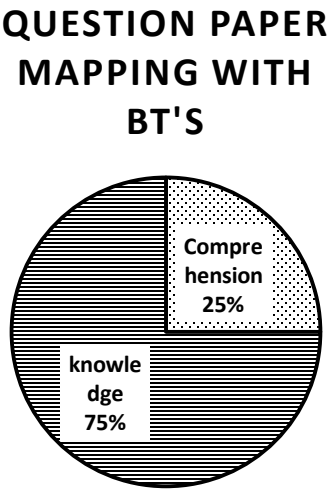
(This question paper is prepared with Course Outcome and BT's mapping)

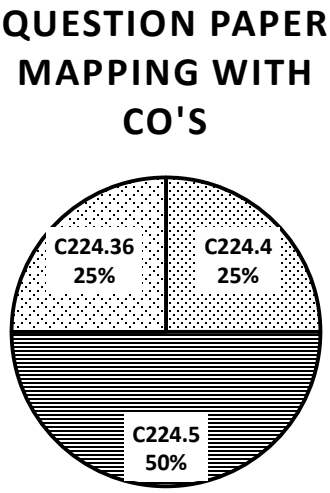
1. Explain BCNF and 2NF normal forms with example? And Write the Problems related to decomposition? (5M) (C224.4)(Comprehension)

2. Define serializability and state the different types of serializabily? (5M) (C224.5) (Knowledge)

3. Describe about Validation base Protocol and Multiple granularity by concurrency control protocol? (5M) (C224.5) (Knowledge)

4. Describe hash base indexing and tree base indexing? (5M) (C224.6) (Knowledge)





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II- Mid Examinations, SEPTEMBER-2023 **Set – II**

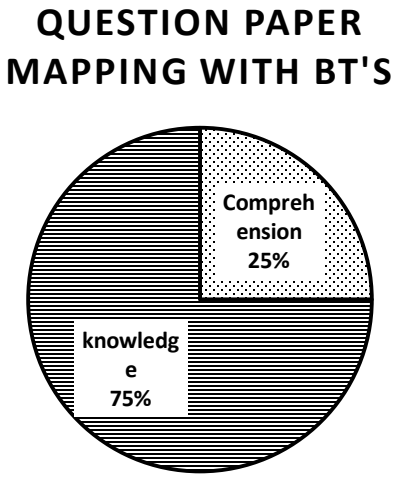
Year & Branch: CSE A,B,C AIDS,AIML **Date: 13-09-2023**

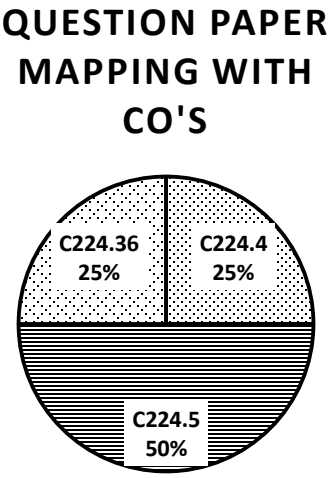
Subject: DATABASE MANAGEMENT SYSTEMS **Marks: 10** **Time: 60 min**

Answer any **TWO** Questions. All Question Carry Equal Marks 2*5=10 marks

(This question paper is prepared with Course Outcome and BT's mapping)

1. Explain 4NF and 5NF normal forms with example? (5M) (C224.4)(Comprehension)
2. Define ACID properties and define Transaction States? (5M) (C224.5) (Knowledge)
3. Explain any Two protocols under concurrent execution ? (5M) (C224.5) (Knowledge)
4. Describe about ISAM? and Explain about Primary and Secondary indexes ? (5M) (C224.6) (Knowledge)





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Sheriguda (V), Ibrahimpatnam (M), R.R.Dist-501 510

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

B.TECH. II YEAR II SEM II- Mid Term Examinations, SEP-2023

DATABASE MANAGEMENT SYSTEM

OBJECTIVE EXAM

NAME:_____ HT.NO:_____

Time: 30mins **10*1/2=5 Marks**

Answer the following multiple choice Questions

All Questions Carry Equal marks

1. A table has fields Fl, F2, F3, F4, F5 with the following functional dependencies F1 → F3
   F2→ F4
   (F1 . F2) → F5 In terms of Normalization, this table is in [ ]
   a) 1NF b) 2NF c) 3NF d) None
2. In order to undo the work of transaction after last commit which one should be used ? [ ]
   a) View b) commit c) Rollback d) Flashback
3. In order to maintain the consistency during transactions database provides [ ]
   a) Commit b)Atomic c)Flashback d) Retain
4. Consider a B+-tree in which the maximum number of keys in a node is 5. What is the minimum number of keys in any non-root node? [ ]
   a) 1 b) 2 c) 3d) 4
5. A file is organized so that the ordering of data records is the same as or close to the ordering of data entries in some index. Then that index is called [ ]
   a) Dense b) sparse c) clustered d) unclustered
6. After groups have been established, SQL applies predicates in the _____ clause, allowing aggregate functions to be used. [ ]
   a) Where b) Having c) Group by d) With
7. Consider a relation scheme R = (A, B, C, D, E, H) on which the following functional dependencies hold: {A–>B, BC–>D, E–>C, D–>A}. What are the candidate keys of R? [ ]
   a) AE, BE b) AE, BE, De c) AEH, BEH, BCH d) AEH, BEH, DEH
8. Which of the following scenarios may lead to an irrecoverable error in a database system ?[ ]
   a) A transaction writes a data item after it is read by an uncommitted transaction
   b) A transaction reads a data item after it is read by an uncommitted transaction
   c) A transaction reads a data item after it is written by a committed transaction
   d) A transaction reads a data item after it is written by an uncommitted transaction
9. Which of the following is correct? [ ]

   a) B-trees are for storing data on disk and B+ trees are for main memory

   b) Range queries are faster on B+ trees.

   c) B-trees are for primary indexes and B+ trees are for secondary indexes

   d) The height of a B+ tree is independent of the number of records.

10. Which of the following is TRUE? [ ]

    a) Every relation in 3NF is also in BCNF

b) A Relation R is in 3NF if every non-prime attribute of R is fully functionally dependent on every key of R

c) Every relation in BCNF is also in 3NF

d) No relation can be in both BCNF and 3NF

II FILL IN THE BLANKS

11. _____ will undo all statements up to commit?
12. Consider the following transaction involving two bank accounts x and y.read(x); x := x – 50; write(x); read(y); y := y + 50; write(y) The constraint that the sum of the accounts x and y should remain constant is that of_____.
13. _____ which increases the number of I/O operations needed to write a single logical block, pays a significant time penalty in terms of write performance.
14. Consider the relation scheme R = {E, F, G, H, I, J, K, L, M, M} and the set of functional dependencies {{E, F} -> {G}, {F} -> {I, J}, {E, H} -> {K, L}, K -> {M}, L -> {N} on R. What is the key for R? _____.
15. The relation scheme Student Performance (name, courseNo, rollNo, grade) has the following functional dependencies:name, courseNo → graderollNo, courseNo → gradename → rollNo rollNo → name The highest normal form of this relation scheme is_____.
16. The physical location of a record determined by a formula that transforms a file key into a record location is_____.
17. In RDBMS, different classes of relations are created using _____ technique to prevent modification anomalies.
18. In _____ allocation method for disk block allocation in a file system, insertion and deletion of blocks in a file is easy.
19. The directory can be viewed as _____ that translates filenames into their directory entries.
20. In a Hierachical database, a hashing function is used to locate the _____.

Sri Indu Institute of Engineering & Technology

Sheriguda (V), Ibrahimpatnam (M), R.R.Dist-501 510

II- Mid Examinations, SEP-2023

Year &Branch: II CSE-A,B& C | Time: 60mins

Subject**: DATABASE MANAGEMENT SYSTEM** | Max marks:10

Date:13-09-2023

ANSWER KEY

Descriptive paper key link:

SET-1:

https://drive.google.com/file/d/17guGYCZ6wjsFq_9TwdQp9kAZ2VBNwQYp/view?usp=sharing

SET-2:

https://drive.google.com/file/d/1JhgoxMIoggCE-glhrVYYLaoQ67xQURct/view?usp=sharing

DATABASE MANAGEMENT SYSTEM
OBJECTIVE KEY

I. Choose the correct alternative:

1. I NF
2. Rollback
3. Atomic
4. 2
5. Clustered
6. With
7. AEH, BEH, DEH
8. A transaction reads a data item after it is written by an uncommitted transaction
9. Range queries are faster on B+ trees.
10. Every relation in BCNF is also in 3NF
11. Rollback
12. Consistency
13. raidlevel 5
14. EFH
15. 3NF
16. hashed file
17. normal forms
18. linked
19. symbol table
20. root

SRI INDU INSTITUTE OF ENGINEERING AND TECHNOLOGY
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Khalsa Ibrahimpatnam, Sheriguda (V), Ibrahimpatnam (M), Ranga Reddy Dist., Telangana – 501 510
Website: https://siiet.ac.in/

ASSIGNMENT- 1 **SUBJECT: Database Management System**

1. Distinguish between File System and DBMS? And explain about data Independence in detail?(C224.1)(Comprehension)
2. Describe in detail about Structure of DBMS?
3. A) Describe the conceptual design with ER model diagram? (C224.1)(Knowledge)
   B) Explain the Additional Features of ER model?(C224.1)(Comprehension)
4. A) Describein detail about integrity constraints over relations?(C224.2)(Knowledge)
   B) Define a view and explain briefly about Destroying/Altering views?(C224.2)(Knowledge)
5. Differentiate between Tuple relational calculus and Domain relational calculus?(C224.2)(Anaylsis)
6. Explain the following operators in SQL with examples
   :i) UNION ii) INTERSECT iii)EXCEPT (C224.3) (Comprehension)

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SUBJECT: DATABASE MANAGEMENT SYSTEM

ASSIGNMENT- 1 KEY LINK :
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Website: https://siiet.ac.in/

ASSIGNMENT- 2 **SUBJECTS: Database Management System**

1. Explain schema refinement in database design **(Comprehension) (C224.4)**
2. Define transaction? Explain the ACID properties of transaction? **(Knowledge) (C224.5)**
3. Explain Concurrency control and lock based protocol? **(Knowledge)(C224.5)**
4. Describe Recovery system failure classification and recovery algorithm **(Knowledge) (C224.6)**
5. Define buffer management and explain failure with loss of non-volatile storage?**(Synthesis) (C224.6)**

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Khalsa Ibrahimpatnam, Sheriguda (V), Ibrahimpatnam (M), Ranga Reddy Dist., Telangana – 501 510
Website: https://siiet.ac.in/

SUBJECT: DATABASE MANAGEMENT SYSTEM

ASSIGNMENT- 2 KEY LINK :

https://drive.google.com/file/d/1vkHFS6MDhj9WkwaByq5MqzrAWP6EEein/view?usp=sharing

Course Title	DATABASE MANAGEMENT SYSTEM
Course Code	CS404PC
Programme	B.Tech
Year & Semester	IIyear II-semester, A sec
Regulation	R18
Course Faculty	Mrs.D. Rajeshwari, Assistant Professor , CSE

Weak Students:

S No	Roll no	No of backlogs	Internal-I Status	Internal-II Status
1	21X31A0510	4	14	14
2	21X31A0512	4	14	14
3	21X31A0531	3	15	14
4	21X31A0535	5	14	14
5	21X31A0539	3	16	15
6	21X31A0544	4	16	15
7	21X31A0546	3	15	15
8	21X31A0505	2	19	18
9	21X31A0507	2	17	16

Advanced learners:

S No	Roll No	Gate Material
1	21X31A0501	E-R model, DDL,DML, VIEWS, Relational Algebra, Tuple relational calculus, Domain relational calculus, Constraints, Triggers, Transactions, Normalization, Hash based Indexing, B+Tree.
2	21X31A0504	
3	21X31A0506	
4	21X31A0525	
5	21X31A0526	
6	21X31A0529	
7	21X31A0533	
8	21X31A0534	
9	21X31A0540	
10	21X31A0545	
11	21X31A0552	
12	21X31A0554	
13	21X31A0560	
14	22X35A0508	

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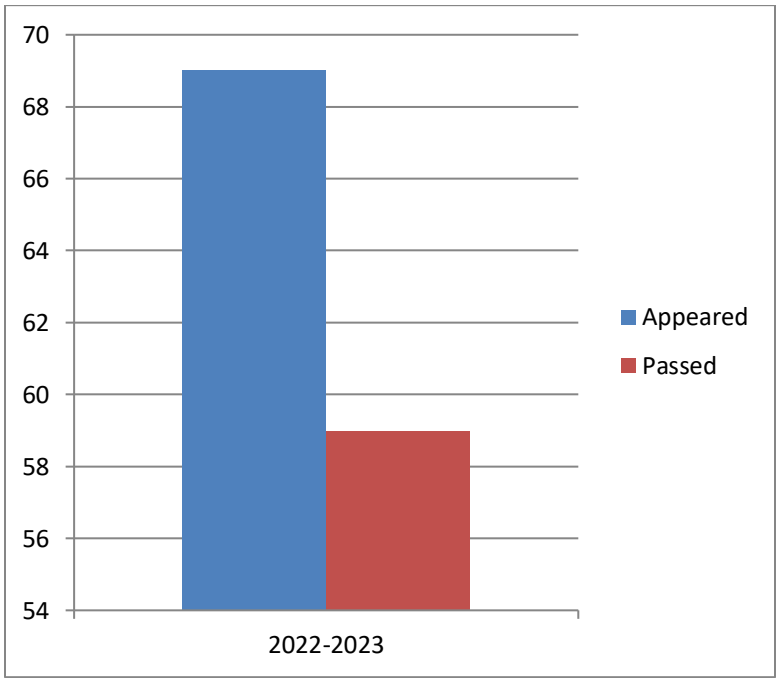
Website: https://siiet.ac.in/

BATCH CSE-II BTECH II SEM CSE-A RESULT ANALYSIS

ACADAMIC YEAR	COURSE NAME	NUMBER OF STUDENTS		QUESTION PAPER SETTING		PASS%
		APPEARED	PASSED	INTERNAL	EXTERNAL	
2022-23	WEB TECHNOLOGIES	69	59	COURSE FACULTY	JNTUH	85.50%



SRI INDU INSTITUTE OF ENGINEERING AND TECHNOLOGY

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Khalsa Ibrahimpatnam, Sheriguda (V), Ibrahimpatnam (M), Ranga Reddy Dist., Telangana – 501 510
Website: https://siiet.ac.in/

DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING

REMEDIAL CLASSES TIME TABLE

A.Y 2022-23 **SEMESTER-II**

BRANCH/ SEC	MON 4.00 PM-5.00 PM	TUE 4.00 PM-5.00 PM	WED 4.00 PM-5.00 PM	THUR 4.00 PM-5.00 PM	FRI 4.00 PM-5.00 PM
II CSE-A	DM	JAVA	DBMS	BEFA	OS
II CSE-B	BEFA	DBMS	DM	OS	JAVA
II CSE-C	DBMS	OS	BEFA	JAVA	DM
III CSE-A	CD	ML	DAA	STM	FIOT
III CSE-B	DAA	FIOT	CD	ML	STM
III CSE-C	ML	STM	FIOT	CD	DAA
IVCSE-A	OB	TQM	DS	-	-
IV CSE-B	DS	OB	TQM	-	-
IV CSE-C	TQM	DS	OB	-	-

HOD
Computer Science & Engg. Dept.
SRI INDU INSTITUTE OF ENGG & TECH.
Sheriguda(V), Ibrahimpatnam(M), R.R.Dist-501 510

PRINCIPAL
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Sri Indu Institute of Engineering & Tech
Sheriguda(Vill), Ibrahimpatnam
R.R. Dist. Telangana -501 510

SRI INDU INSTITUTE OF ENGINEERING AND TECHNOLOGY

Department of Computer science and Engineering

Course Outcome Attainment (Internal Examination-1)

Name of the faculty : Mrs. Rajeshwari D
Academic Year: 2022-23
Branch & Section: CSE -A
Examination: I Internal
Course Name: DBMS
Year: II
Semester: II

S.No	HT No.	Q1a	Q1b	Q1c	Q2a	Q2b	Q2c	Q3a	Q3b	Q3c	Q4a	Q4b	Q4c	Obj1	A1
Max. Marks ==>		5			5			2	3		5			10	5
1	21X31A0501										5			8	5
2	21X31A0502								3		5			9	5
3	21X31A0503								3		4			8	5
4	21X31A0504								3		4			9	5
5	21X31A0505								3		4			8	5
6	21X31A0506	5									5			9	5
7	21X31A0507	1									5			7	5
8	21X31A0508	5									4			9	5
9	21X31A0509	2									5			9	5
10	21X31A0510										0			9	5
11	21X31A0511	4									4			9	5
12	21X31A0512								1					8	5
13	21X31A0513								3		4			8	5
14	21X31A0514								4		5			9	5
15	21X31A0515	4									4			8	5
16	21X31A0516	3									4			8	5
17	21X31A0517	3									4			8	5
18	21X31A0518							2	3		4			9	5
19	21X31A0519							2	3		5			9	5
20	21X31A0520							2	1		5			8	5
21	21X31A0521							2	2		4			8	5
22	21X31A0522							2	1		4			8	5
23	21X31A0523							2	2		4			9	5
24	21X31A0524							2	1		4			8	5
25	21X31A0525							2	3		5			9	5
26	21X31A0526	3									4			8	5
27	21X31A0527								3		4			7	5
28	21X31A0528							1	3		4			7	5
29	21X31A0529							2	2		4			8	5
30	21X31A0530							1			4			7	5
31	21X31A0531	2						1						6	5
32	21X31A0532	2									2			6	5
33	21X31A0533	5									5			9	5
34	21X31A0534	5									4			9	5
35	21X31A0535	2												7	5
36	21X31A0536	4												7	5
37	21X31A0537	1									4			7	5
38	21X31A0538	5						2	3					9	5
39	21X31A0539	3						1						6	5
40	21X31A0540							2	3		5			9	5

41	21X31A0541							2	3		4			8	5
42	21X31A0542							2	3		4			9	5
43	21X31A0543	3									5			8	5
44	21X31A0544							2	1					7	5
45	21X31A0545	5						2	3					9	5
46	21X31A0546							2			2			6	5
47	21X31A0547	2												7	5
48	21X31A0548							2	3		4			8	5
49	21X31A0549								2		4			7	5
50	21X31A0550							2	2		3			7	5
52	21X31A0552							2	2		4			8	5
53	21X31A0554	5									5			9	5
54	21X31A0555	5									2			7	5
55	21X31A0556	5									3			8	5
56	21X31A0557	4						2	3					8	5
57	21X31A0559	3									4			8	5
58	21X31A0560	5									4			9	5
59	21X31A0561	4									4			8	5
60	21X31A0562								3		4			7	5
61	21X31A0563								3		4			7	5
62	21X31A0564							2			5			9	5
63	21X31A0565							2			5			8	5
64	22X35A0501							2	3		5			9	5
65	22X35A0502							2	3		5			8	5
66	22X35A0503	3									4			7	5
67	22X35A0504				3						5			8	5
68	22X35A0505							2	3		5			9	5
69	22X35A0506							2	1		4			7	5
70	22X35A0507							2	3		1			7	5
71	22X35A0508								3		5			9	5
Target set by the faculty / HoD		3.00	0.00	0.00	3.00	0.00	0.00	1.20	1.80	0.00	3.00	0.00	0.00	6.00	3.00
Number of students performed above the target		22	0	0	1	0	0	27	31	0	55	0	0	70	70
Number of students attempted		29	0	0	1	0	0	31	37	0	60	0	0	70	70
Percentage of students scored more than target		76%			100%			87%	84%		92%			100%	100%

CO Mapping with Exam Questions:

CO - 1	**Y**			**Y**									y	y
CO - 2							**Y**	**Y**					y	y
CO - 3										**Y**			y	y
CO - 4													y	y
CO - 5														
CO - 6														

CO Attainment based on Exam Questions:

CO - 1	76%			100%									100%	100%
CO - 2							87%	84%					100%	100%
CO - 3										92%			100%	100%
CO - 4													100%	100%
CO - 5														
CO - 6														

CO	**Subj**	obj		Asgn	Overall	Level
CO-1	88%	100%		100%	96%	3.00
CO-2	85%	100%		100%	95%	3.00
CO-3	92%	100%		100%	97%	3.00
CO-4		100%		100%	100%	3.00
CO-5						
CO-6						

Attainment Level	
1	40%
2	50%
3	60%

Attainment (Internal 1 Examination) = **3.00**

SRI INDU INSTITUTE OF ENGINEERING AND TECHNOLOGY

Department of Computer science and Engineering

Course Outcome Attainment (Internal Examination-2)

Name of the faculty: Mrs. Rajeshwari D | Academic Year: 2022-23

Branch & Section: CSE -A | Examination: II Internal

Course Name: DBMS | Year: II | Semester: II

S.No	HT No.	Q1a	Q1b	Q1c	Q2a	Q2b	Q2c	Q3a	Q3b	Q3c	Q4a	Q4b	Q4c	Obj2	A2
Max. Marks ==>		5			5			5			5			10	5
1	21X31A0501	5			4									8	5
2	21X31A0502	5			2									8	5
3	21X31A0503	3									4			7	5
4	21X31A0504	3									5			10	5
5	21X31A0505										5			7	5
6	21X31A0506	4			5									10	5
7	21X31A0507	4												7	5
8	21X31A0508				5						3			8	5
9	21X31A0509	5												10	5
10	21X31A0510				2									7	5
11	21X31A0511	1									5			8	5
12	21X31A0512				2									7	5
13	21X31A0513	4												7	5
14	21X31A0514				4			5						9	5
15	21X31A0515				5						4			9	5
16	21X31A0516				2									7	5
17	21X31A0517	3			5									9	5
18	21X31A0518										5			8	5
19	21X31A0519	4									5			9	5
20	21X31A0520	4									2			8	5
21	21X31A0521	4						1						8	5
22	21X31A0522	4						3						8	5
23	21X31A0523							4			5			9	5
24	21X31A0524							4			2			8	5
25	21X31A0525	4			5									10	5
26	21X31A0526	4			5									10	5
27	21X31A0527				2						4			8	5
28	21X31A0528	1			4									7	5
29	21X31A0529	4			5									9	5
30	21X31A0530	4						4						9	5
31	21X31A0531							3			0			8	5
32	21X31A0532				3			4						7	5
33	21X31A0533							5			5			10	5
34	21X31A0534				5						5			10	5
35	21X31A0535				2									7	5
36	21X31A0536				3			1						7	5
37	21X31A0537										3			8	5
38	21X31A0538	5			2									9	5
39	21X31A0539	5												7	5
40	21X31A0540				2									7	5
41	21X31A0541				5									8	5
42	21X31A0542				5			2						8	5
43	21X31A0543	0						5						8	5
44	21X31A0544	4												7	5
45	21X31A0545	5			5									10	5
46	21X31A0546	1												9	5
47	21X31A0547				2									7	5
48	21X31A0548	5			2									9	5

49	21X31A0549	3									1			8	5
50	21X31A0550	3									2			9	5
51	21X31A0552	2									4			9	5
52	21X31A0554				5			4						10	5
53	21X31A0555				3			1						9	5
54	21X31A0556							3						9	5
55	21X31A0557	4			5									9	5
56	21X31A0559	2									3			8	5
57	21X31A0560	4			5									10	5
58	21X31A0561	4			2									8	5
59	21X31A0562	3			2									8	5
60	21X31A0563				5						4			9	5
61	21X31A0564	5												9	5
62	21X31A0565	5												9	5
62	22X35A0501	5			2									9	5
62	22X35A0502	5			4									10	5
62	22X35A0503	3									4			9	5
62	22X35A0504				2									7	5
62	22X35A0505	4									4			9	5
62	22X35A0506	2						2						8	5
62	22X35A0507	4			2									9	5
62	22X35A0508	3			5									9	5
Target set by the faculty / HoD		3.00	0.00	0.00	3.00	0.00	0.00	3.00	0.00	0.00	3.00	0.00	0.00	6.00	3.00
Number of students performed above the target		36	0	0	23	0	0	11	0	0	18	0	0	70	70
Number of students attempted		43	0	0	38	0	0	16	0	0	23	0	0	70	70
Percentage of students scored more than target		84%			61%			69%			78%			100%	100%

CO Mapping with Exam Questions:

CO - 1														
CO - 2														
CO - 3														
CO - 4	**y**												y	y
CO - 5				**y**			**y**						y	y
CO - 6										**y**			y	y

CO Attainment based on Exam Questions:

CO - 1														
CO - 2														
CO - 3														
CO - 4	84%												100%	100%
CO - 5				61%			69%						100%	100%
CO - 6										78%			100%	100%

CO	**Subj**	obj		Asgn	Overall	Level
CO-1						
CO-2						
CO-3						
CO-4	84%	100%		100%	95%	3.00
CO-5	65%	100%		100%	88%	3.00
CO-6	78%	100%		100%	93%	3.00

Attainment Level	
1	40%
2	50%
3	60%

Attainment (Internal Examination-2) = **3.00**

SRI INDU INSTITUTE OF ENGINEERING AND TECHNOLOGY

Department of Computer science and Engineering

Course Outcome Attainment (University Examinations)

Name of the faculty : Mrs. Rajeshwari D Academic Year: 2022-23

Branch & Section: CSE -A Year / Semester: II / II

Course Name: DBMS

S.No	Roll Number	Marks Secured
1	21X31A0501	33
2	21X31A0502	44
3	21X31A0503	42
4	21X31A0504	48
5	21X31A0505	17
6	21X31A0506	64
7	21X31A0507	39
8	21X31A0508	32
9	21X31A0509	39
10	21X31A0510	12
11	21X31A0511	51
12	21X31A0512	13
13	21X31A0513	44
14	21X31A0514	46
15	21X31A0515	52
16	21X31A0516	35
17	21X31A0517	70
18	21X31A0518	17
19	21X31A0519	55
20	21X31A0520	37
21	21X31A0521	39
22	21X31A0522	48
23	21X31A0523	47
24	21X31A0524	26
25	21X31A0525	47
26	21X31A0526	32
27	21X31A0527	31
28	21X31A0528	31
29	21X31A0529	26
30	21X31A0530	26
31	21X31A0531	10
32	21X31A0532	26
33	21X31A0533	34
34	21X31A0534	32
35	21X31A0535	-1
Max Marks		75

S.No	Roll Number	Marks Secured
36	21X31A0536	26
37	21X31A0537	26
38	21X31A0538	29
39	21X31A0539	0
40	21X31A0540	31
41	21X31A0541	29
42	21X31A0542	38
43	21X31A0543	13
44	21X31A0544	0
45	21X31A0545	36
46	21X31A0546	14
47	21X31A0547	27
48	21X31A0548	26
49	21X31A0549	27
50	21X31A0550	29
51	21X31A0552	30
52	21X31A0554	53
53	21X31A0555	31
54	21X31A0556	45
55	21X31A0557	40
56	21X31A0559	38
57	21X31A0560	50
58	21X31A0561	50
59	21X31A0562	53
60	21X31A0563	49
61	21X31A0564	52
62	21X31A0565	31
63	22X35A0501	28
64	22X35A0502	38
65	22X35A0503	27
66	22X35A0505	38
67	22X35A0506	30
68	22X35A0507	37
69	22X35A0508	32

Class Average mark	34
Number of students performed above the target	32
Number of successful students	69
Percentage of students scored more than target	46%
Attainment level	**2**

Attainment Level	% students
1	40%
2	50%
3	60%

SRI INDU INSTITUTE OF ENGINEERING AND TECHNOLOGY

Department of Computer science and Engineering

Course Outcome Attainment

Name of the faculty: Mrs. Rajeshwari D
Branch & Section: CSE -A
Course Name: DBMS

Academic Year: 2022-23
Examination: I Internal
Year: II
Semester: II

Course Outcomes	1st Internal Exam	2nd Internal Exam	Internal Exam	University Exam	Attainment Level
CO1	3.00		3.00	2.00	2.25
CO2	3.00		3.00	2.00	2.25
CO3	3.00		3.00	2.00	2.25
CO4	3.00	3.00	3.00	2.00	2.25
CO5		3.00	3.00	2.00	2.25
CO6		3.00	3.00	2.00	2.25
Internal & University Attainment:			3.00	2.00	
Weightage			25%	75%	
CO Attainment for the course (Internal, University			0.75	1.50	
CO Attainment for the course (Direct Method)			2.25		

Overall course attainment level **2.25**

SRI INDU INSTITUTE OF ENGINEERING & TECHNOLOGY

Department of Electronics and Communication Engineering

Program Outcome Attainment (from Course)

Name of Faculty: Rajeshwari D | Academic Year: 2022-23
Branch & Section: CSE -A | Year: II
Course Name: DBMS | Semester: II

CO-PO mapping

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
CO1	-	3	2	-	1	-	-	-	-	-	-	-	-	-
CO2	-	2	3	1		-	-	-	-	-	-	-	-	-
CO3	3	-	-	-	-	-	-	-	-	-	-	2	-	-
CO4	-	2	3	1	-	-	-	-	-	-	-	-	-	2
CO5	2	-	3	-	-	-	1	-	-	-	-	-	-	2
CO6	2	-	-	-	3	-	-	-	-	-	-	-	-	-
Course	2.3	2.3	2.75	1	2	-	1	-	-	-	-	2	-	-

CO	**Course Outcome Attainment**
CO1	2.25
CO2	2.25
CO3	2.25
CO4	2.25
CO5	2.25
CO6	2.25
Overall course attainment level	**2.25**

PO-ATTAINMENT

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO Attainment	**1.73**	**1.73**	**2.06**	**0.75**	**1.50**		**0.75**					**1.50**

CO contribution to PO - 33%, 67%, 100% (Level 1/2/3)

Attendance Register Link:

https://drive.google.com/file/d/1pa2p4JrE67z44FeFS3hEmFrQmtS2o-g6/view?usp=sharing