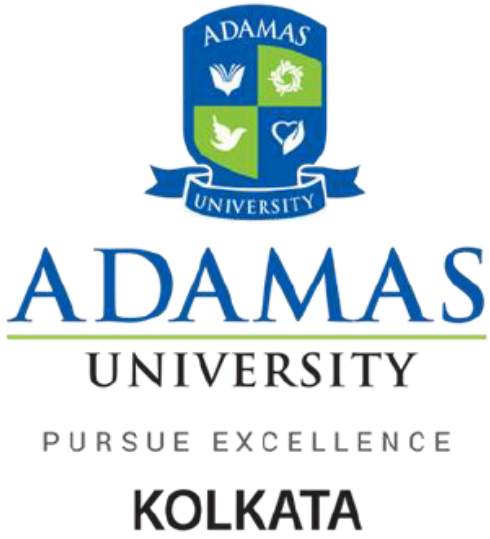

ADAMAS UNIVERSITY

SCHOOL OF ENGINEERING & TECHNOLOGY

Department of Computer Science and Engineering

Bachelor in Computer Application

Course File (Theory)

Course Code & Name: CSE11412&Database Management System

Course Coordinator: Mr. Pabak Indu

Year:II
Semester: III

7. **Name of the Faculty: Mr. PABAK INDU** — **Course Code: CSE11412**
8. **Course : Database Management System** — **L: 3**
9. **Program : BCA** — **T: 0**
10. **Target : 60%** — **P: 0**
C: 3

THEORY COURSE FILECONTENTS

Check list Course Outcomes Attainment

S. No.	Contents	Available (Y/N/NA)	Date of Submission	Signature of HOD
1.	Authenticated Syllabus Copy	Y		
2.	Individual Time Table	Y		
3.	Students' Name List (Approved Copy)	Y		
4.	Course Plan, PO, PSO, COs, CO-PO Mapping, COA Plan, Session Plan and Periodic Monitoring	Y		
5.	Previous Year End Semester Question Papers	Y		
6.	Question Bank (All Units - Part A, Part B & C)	Y		
7.	Dissemination of Syllabus and Course Plan to Students	Y		
8.	Lecture Notes - Unit I, II & III	Y		
9.	**Sample Documents and Evaluation Sheet for Internal Assessment** – Tutorials / Assignments / Class Test / Open Book Test / Quiz / Project / Seminar / Role Playif any (Before Mid Term)	Y		
10.	**Mid Term Examination** A. Question Paper / Any Other Assessment Tools Used B. Sample Answer Scripts (Best, Average,Poor) if required C. Evaluation Sheet D. Slow Learners List and RemedialMeasures	Y		
11.	Lecture Notes – Unit IV & V	Y		
12.	**Sample Documents and Evaluation Sheet for Internal Assessment**– Tutorials / Assignments / Class Test /Open Book Test / Quiz / Project / Seminar / Role Play if any (After Mid Term)	Y		
13.	Course End Survey (Indirect Assessment)& Consolidation	Y		
14.	**End Term Examination** A. Question Paper & Answer Key B. Sample Answer Scripts (Best, Average,Poor) if required C. Evaluation Sheet	Y		

Year:II
Semester: III

7. Name of the Faculty: Mr. PABAK INDU **Course Code: CSE11412**
8. Course : Database Management System **L: 3**
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C: 3

	D. Slow Learners List and RemedialMeasures.			
15.	Content Beyond the Syllabus (Proof)	Y		
16.	Innovative Teaching Tools Used for TLP			
17.	Details of Visiting Faculty Session / Industry Expert/ Guest Lecture / Seminar / Field Visit / Webinars / Flipped Class Room / Blended Learning / Online Resources etc.	NA		
18.	Consolidated Mark Statement	Y		
19.	CO Attainment (Mid Term + Internal Assessment + End Term)	Y		
20.	Gap Analysis & Remedial Measures	Y		
21.	CO - PO Attainment	Y		
22.	Class Record (Faculty Logbook)	Y		

Signature of HOD/ Dean **Signature of Faculty**

Date: **Date:**

Year:II
Semester: III

7. **Name of the Faculty: Mr. PABAK INDU** — **Course Code: CSE11412**
8. **Course : Database Management System** — **L: 3**
9. **Program : BCA** — **T: 0**
10. **Target : 60%** — **P: 0**, **C: 3**

Syllabus Copy

CSE11412	Database Management Systems	L	T	P	C
Version 1.0	Contact Hours-45	3	0	0	3
Pre-requisites/Exposure	Set Theory, Knowledge of programming language.				
Co-requisites	--				

Course Objectives:

- To understand the different issues involved in the design and implementation of a database system.
- To study the physical and logical database designs, database modelling, relational, hierarchical, and network models.
- To understand and use data manipulation language to query, update, and manage a database.
- To develop an understanding of essential DBMS concepts such as: database security, integrity, concurrency.
- To design and build a simple database system and demonstrate competence with the fundamental tasks involved with modelling, designing, and implementing a DBMS.

Course Content:

Unit I: **8 lecture hours**

Database system architecture: Data Abstraction, Data Independence, Data Definition Language (DDL), Data Manipulation Language (DML).
Data models: Entity-relationship model, network model, relational and object-oriented data models, integrity constraints, data manipulation operations.
ER models: Entity Set, Relation Ship Set, Cardinality Properties, Type of Entities, Type of Keys, Aggregation, Specialization and Generalization.

Unit II: **9 lecture hours**

Relational query languages: Relational algebra, Fundamental Operations, Additional Operations. Select, Project, Cartesian Product, UNION, Set difference, Rename. Types of joining operations, Division, Intersection, Aggregate. Tuple and domain relational calculus, SQL3, DDL and DML constructs, Open source and Commercial DBMS - MYSQL, ORACLE, DB2, SQL server.

Unit III: **10 lecture hours**

Relational database design: Integrity Constraint, Domain Constrain, Referential Integrity, Functional Dependencies, Closure of Set, Cover and Canonical Cover, Types of Anomalies, Armstrong's axioms, Extended Armstrong's axioms, Assertions and Demons.
Data Base Decomposition: Domain and data dependency, Normal forms: 1NF, 2 NF, 3 NF, BCNF, Dependency preservation, Lossless design.

Year:II
Semester: III

7. Name of the Faculty: Mr. PABAK INDU **Course Code: CSE11412**
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C: 3

Unit IV: **9 lecture hours**

Query processing and optimization: Evaluation of relational algebra expressions, Query equivalence, Join strategies, Query optimization algorithms.
Storage strategies: Indices, B-trees, B+-trees, hashing, File System, Disk Organization, Physical Storage, Buffer management.

Unit V: **9 lecture hours**

Transaction processing: Failure, Recovery from Failure, Different States of Transaction, Transaction Isolation, ACID property, Serializability of scheduling, Multi-version and optimistic Concurrency Control schemes.
Concurrency control: Locking and timestamp-based schedulers, 2-Phase Locking Protocol, Dead Lock,
Database Security: Authentication, Authorization and access control, DAC, MAC and RBAC models, Intrusion detection, SQL injection.
Advanced topics: Distributed databases, Data warehousing and data mining.

Text Books:

1. "Database System Concepts", 6th Edition by Abraham Silberschatz, Henry F. Korth, S. Sudarshan, McGraw-Hill
2. "Principles of Database and Knowledge – Base Systems", Vol 1 by J. D. Ullman, Computer Science Press.

Reference Books:

1. "Fundamentals of Database Systems", 5th Edition by R. Elmasri and S. Navathe, Pearson Education
2. "Foundations of Databases", Reprint by Serge Abiteboul, Richard Hull, Victor Vianu, Addison-Wesley.

Web Resources:

NA

Journals:

NA

Year:II
Semester: III

7. Name of the Faculty: Mr. PABAK INDU — Course Code: CSE11412
8. Course : Database Management System — L: 3
9. Program : BCA — T: 0
10. Target : 60% — P: 0
C: 3

Faculty Individual Time Table

ADAMAS UNIVERSITY, KOLKATA

SCHOOL OF ENGINEERING AND TECHNOLOGY

DEPARTMENT OF CSE

Programme: BCA

Course Code & Course: CSE21911& Database Management System
Faculty Coordinator: Mr. Pabak Indu

Day & Time	9:40-10:30	10.30 - 11.20	11.20 - 12.10	12.10 - 01.00	01.00 - 01.50	01.50 - 02.40	02.40 - 03.30	03.30 - 04.20	4.20-5.10
Monday	-		Database Management System	LUNCH					
Tuesday	Database Management System		-						
Wednesday	-		Database Management System		-				
Thursday	-				-			-	
Friday	-	-	-		-				

Signature of HOD

Date:

Signature of Class Coordinator

Date:

Year:II
Semester: III

7. Name of the Faculty: Mr. PABAK INDU — Course Code: CSE11412
8. Course : Database Management System — L: 3
9. Program : BCA — T: 0
10. Target : 60% — P: 0
C: 3

Students Name List

Roll Number	Registration Number	Name of the Student
UG/02/BCA/2020/001	AU/2020/0004253	DEBOJYOTI SAHA
UG/02/BCA/2020/037	AU/2020/0005526	OLIVA DUTTA
UG/02/BCA/2020/003	AU/2020/0004448	SATYAJIT GHOSH
UG/02/BCA/2020/004	AU/2020/0004449	DEBDYUTI DAS
UG/02/BCA/2020/005	AU/2020/0004453	SAYANTAN JANA
UG/02/BCA/2020/006	AU/2020/0004457	SANJUKTA JANA
UG/02/BCA/2020/007	AU/2020/0004458	AYAN RAHAMAN
UG/02/BCA/2020/011	AU/2020/0004483	ANWESHA PRAMANIK
UG/02/BCA/2020/015	AU/2020/0004498	ANTHONY PRAKASH ROZARIO
UG/02/BCA/2020/016	AU/2020/0004501	MOUSUMI DUTTA
UG/02/BCA/2020/017	AU/2020/0004504	DHRUBAJYOTI DEY
UG/02/BCA/2020/018	AU/2020/0004507	PRITAM HORE
UG/02/BCA/2020/019	AU/2020/0004509	ARATRIKA BOSE
UG/02/BCA/2020/020	AU/2020/0004510	TITHI PAUL
UG/02/BCA/2020/022	AU/2020/0004514	PARICHOY NANDI
UG/02/BCA/2020/023	AU/2020/0004515	ADITYA JAMAN
UG/02/BCA/2020/024	AU/2020/0004517	APARESH MUHURI
UG/02/BCA/2020/025	AU/2020/0004520	KOSTURI MONDAL
UG/02/BCA/2020/026	AU/2020/0004522	ARITRA DAS
UG/02/BCA/2020/027	AU/2020/0004525	RISHI BARUA
UG/02/BCA/2020/028	AU/2020/0004526	NEELASH SAHA
UG/02/BCA/2020/029	AU/2020/0004533	BITTASWER GHOSH
UG/02/BCA/2020/030	AU/2020/0004535	SUNEET CHOUDHARY
UG/02/BCA/2020/031	AU/2020/0004543	ABHISHEK TARAFDAR
UG/02/BCA/2020/032	AU/2020/0004547	AYON CHAKRABORTY
UG/02/BCA/2020/034	AU/2020/0004564	ASMAT SK
UG/02/BCA/2020/035	AU/2020/0004575	NIKHIL KUMAR SAH
UG/02/BCA/2020/036	AU/2020/0004582	SUPRITA NANDY
UG/02/BCA/2020/033	AU/2020/0004552	JYOTISHKA DE
UG/02/BCA/2020/002	AU/2020/0004290	AZMAT ALI

Year:II
Semester: III

7. **Name of the Faculty: Mr. PABAK INDU** **Course Code: CSE11412**
8. **Course : Database Management System** **L: 3**
9. **Program : BCA** **T: 0**
10. **Target : 60%** **P: 0**
C: 3

UG/02/BCABFSI/2020/005	AU/2020/0004482	SWARNAMOY GHOSH
UG/02/BCABFSI/2020/004	AU/2020/0004492	SWAPNIL MITRA
UG/02/BCABFSI/2020/001	AU/2020/0004505	SOMNATH GAYEN
UG/02/BCABFSI/2020/002	AU/2020/0004598	BARUN RAJBHAR
UG/02/BCABFSI/2020/003	AU/2020/0004605	RAKIBUL ISLAM
UG/02/BCAGA/2020/007	AU/2020/0004478	HRITANKAR DAS
UG/02/BCAGA/2020/001	AU/2020/0004493	SUSMIT SHAW
UG/02/BCAGA/2020/006	AU/2020/0004497	ABHISHEK MONDAL
UG/02/BCAGA/2020/002	AU/2020/0004500	ARKA MITRA
UG/02/BCAGA/2020/003	AU/2020/0004524	SOURAV MONDAL
UG/02/BCAGA/2020/005	AU/2020/0004568	SUBHAJIT SIRCAR
UG/02/BCAGA/2020/008	AU/2020/0004496	SUMAN GHOSH
UG/02/BCAGA/2020/004	AU/2020/0004539	RANITA BAGCHI

Signature of HOD/Dean **Signature of Class Coordinator**

Date: **Date:**

COURSE PLAN

Target	60% (marks)
Level-1	50% (population)
Level-2	60% (population)
Level-3	70% (population)

1. Method of Evaluation

UG	**PG**
Internal Assessment (30%) (Quizzes/Tests, Assignments & Seminars etc.)	Internal Assessment (30%) (Quizzes/Tests, Assignments & Seminars etc.)
Mid Semester Examination (20%)	Mid Semester Examination (20%)
End Semester Examination (50%)	End Semester Examination (50%)

*Keep as per Program (UG/PG)

2. Passing Criteria

Year:II
Semester: III

7. **Name of the Faculty: Mr. PABAK INDU** **Course Code: CSE11412**
8. **Course : Database Management System** **L: 3**
9. **Program : BCA** **T: 0**
10. **Target : 60%** **P: 0**
C: 3

Scale	**PG**	**UG**
Out of 10 Point Scale	CGPA – "5.00" Min. Individual Course Grade – "C" Passing Minimum – 40	CGPA – "5.00" Min. Individual Course Grade – "C" Passing Minimum – 35

*Keep as per Program (UG/PG)

3. **Pedagogy**
   - **Direct Instruction**
   - Kinesthetic Learning
   - **Flipped Classroom**
   - Differentiated Instruction
   - Expeditionary Learning
   - Inquiry Based Learning
   - Game Based Learning
   - Personalized Learning
4. **Topics introduced for the first time in the program through this course**
   - Agile Methodologies

5. **References:**

Text Books	Web Resources	Journals	Reference Books
2	-	-	2

Signature of HOD/Dean **Signature of Faculty**

Date: **Date:**

Year:II
Semester: III

7. Name of the Faculty: Mr. PABAK INDU **Course Code: CSE11412**
8. Course : Database Management System **L: 3**
9. Program : BCA **T: 0**
10. Target : 60% **P: 0**
C: 3

GUIDELINES TO STUDY THE SUBJECT

Instructions to Students:

1. Go through the 'Syllabus' in the LMS in order to find out the Reading List.
2. Get your schedule and try to pace your studies as close to the timeline as possible.
3. Get your on-line lecture notes (Content, videos) at Lecture Notes section. These are our lecture notes. Make sure you use them during this course.
4. check your LMS regularly
5. go through study material
6. check mails and announcements on blackboard
7. keep updated with the posts, assignments and examinations which shall be conducted on the blackboard
8. Be regular, so that you do not suffer in any way
9. C**ell Phones and other Electronic Communication Devices:** Cell phones and other electronic communication devices (such as Blackberries/Laptops) are not permitted in classes during Tests or the Mid/Final Examination. Such devices MUST be turned off in the class room.
10. **E-Mail and online learning tool:** Each student in the class should have an e-mail id and a pass word to access the LMS system regularly. Regularly, important information – Date of conducting class tests, guest lectures, via online learning tool. The best way to arrange meetings with us or ask specific questions is by email and prior appointment. All the assignments preferably should be uploaded on online learning tool. Various research papers/reference material will be mailed/uploaded on online learning platform time to time.
11. **Attendance:** Students are required to have minimum attendance of 75% in each subject. Students with less than said percentage shall NOT be allowed to appear in the end semester examination.

This much should be enough to get you organized and on your way to having a great semester! If you need us for anything, send your feedback through e-mail pabak.indu@adamasuniversity.ac.in Please use an appropriate subject line to indicate your message details.

There will no doubt be many more activities in the coming weeks. So, to keep up to date with all the latest developments, please keep visiting this website regularly.

Year:II
Semester: III

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C: 3

RELATED OUTCOMES

1. The expected outcomes of the Program are:

PO1	**Computational Knowledge:** Understand and apply mathematical foundation, computing and domain knowledge for the conceptualization of computing models from defined problems.
PO2	**Problem Analysis**: Ability to identify, critically analyze and formulate complex computing problems using fundamentals of computer science and application domains.
PO3	**Design / Development of Solutions**: Ability to transform complex business scenarios and contemporary issues into problems, investigate, understand and propose integrated solutions using emerging technologies.
PO4	**Conduct Investigations of Complex Computing Problems**: Ability to devise and conduct experiments, interpret data and provide well informed conclusions.
PO5	**Modern Tool Usage:** Ability to select modern computing tools, skills and techniques necessary for innovative software solutions.
PO6	**Professional Ethics**: Ability to apply and commit professional ethics and cyber regulations in a global economic environment.
PO7	**Life-long Learning**: Recognize the need for and develop the ability to engage in continuous learning as a computing professional.
PO8	**Project Management and Finance:** Ability to understand, management and computing principles with computing knowledge to manage projects in multidisciplinary environments.
PO9	**Communication Efficacy:** Communicate effectively with the computing community as well as society by being able to comprehend effective documentations and presentations.
PO10	**Societal & Environmental Concern:** Ability to recognize economic, environmental, social, health, legal, ethical issues involved in the use of computer technology and other consequential responsibilities relevant to professional practice.
PO11	**Individual & Team Work:** Ability to work as a member or leader in diverse teams in multidisciplinary environment.
PO12	**Innovation and Entrepreneurship:** Identify opportunities, entrepreneurship vision and use of innovative ideas to create value and wealth for the betterment of the individual and society.

2. The expected outcomes of the Specific Program are: (upto3)

PSO1	To engage in professional development and to pursue post graduate education in the fields of Information Technology and Computer Applications.
PSO2	To provide the students about computing principles and business practices in software solutions, outsourcing services, public and private sectors.
PSO3	Analyze and synthesis computing systems through quantitative and qualitative techniques.

Year:II
Semester: III

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C: 3

3. **The expected outcomes of the Course are: (minimum 4 and maximum 6)**

CO1	**Describe** the fundamental elements of relational database management systems.
CO2	**Design** Entity-Relationship Model for enterprise level databases
CO3	**Develop** the database and provide restricted access to different users of database and formulate the Complex SQL queries.
CO4	**Analyze** various Relational Formal Query Languages and various Normal forms to carry out Schema refinement.
CO5	**Utilize** suitable Indices and Hashing mechanisms for real time implementation.

4. **Co-Relationship Matrix**
Indicate the relationships by1- Slight (Low) 2- Moderate (Medium) 3-Substantial (High)

Program Outcomes / Course Outcomes	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PO 11	PO 12	PSO 1	PSO 2	PSO 3
CO1	3	2	-	-	-	-	-	-	-	-	-			-	-
CO2	3	2	3	3	-	-	-	-	-	-	-	-	3	-	-
CO3	3	2	3	3	-	-	-	-	-	-	-	-	-	-	2
CO4	3	2	3	3	-	-	-	-	-	-	-	2	-	-	2
CO5	-	-	3	-	2	3	-	-	-	-	-	-	-	-	2
Average	**3**	**2**	**3**	**3**	**2**	**3**	**-**	**-**	**-**	**-**	**-**	**2**	**3**	**-**	**2**

Year:II
Semester: III

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5. Course Outcomes Assessment Plan (COA):

Course Outcomes	Internal Assessment* (30 Marks)		Mid Term Exam (20 Marks)	End Term Exam (50 Marks)	Total (100 Marks)
	Before Mid Term	After Mid Term			
CO1					
CO2					
CO3					
CO4					
CO5					
Total					

* Internal Assessment – Tools Used: Tutorial, Assignment, Seminar, Class Test etc.

Year:II
Semester: III

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OVERVIEW OF COURSE PLAN OF COURSE COVERAGE

Course Activities:

S. No.	Description	Planned			Actual			Remarks
		From	To	No. of Session	From	TO	No. of Session	
1.	Database system architecture	01.09.2021	21.09.2021	8	01.09.2021	21.09.2021		Completed As per Plan
2.	Relational query languages	22.09.2021	25.10.2021	9	22.09.2021	4.10.2021	10	Completed As per Plan
3.	Relational database design	26.10.2021	01.12.2021	10	09.10.2021	10.11.2021	8	Completed As per Plan
4.	Query processing and optimization	06.12.2021	22.12.2021	9				
5.	Transaction processing and Deadlock	06.12.2021	22.12.2021	9				

Total No. of Instructional periods available for the course:45 Sessions

Signature of HOD/Dean — **Signature of Faculty**

Date: — **Date:**

Year:II
Semester: III

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8. **Course : Database Management System** **L: 3**
9. **Program : BCA** **T: 0**
10. **Target : 60%** **P: 0**
C: 3

SESSION PLAN
UNIT-I

Session Plan				Actual Delivery			
Lect.	Date	Topics to be Covered	CO Mapped	Lect.	Date	Topics Covered	CO Achieved
1	01.09.2021	Database system architecture	CO1	1	01.09.2021	Database system architecture	CO1
2	06.09.2021	Data Abstraction, Data Independence	CO1	2	06.09.2021	Data Abstraction, Data Independence	CO1
3	07.09.2021	Data Definition Language (DDL), Data Manipulation Language (DML).	CO1	3	07.09.2021	Data Definition Language (DDL), Data Manipulation Language (DML).	CO1
4	08.09.2021	Data models-I	CO1	4	08.09.2021	Data models-I	CO1
5	13.09.2021	Data models-II	CO1	5	13.09.2021	Data models-II	CO1
6	14.09.2021	ER models-I	CO1	6	14.09.2021	ER models-I	CO1
7	15.09.2021	ER models-II	CO1	7	15.09.2021	ER models-II	CO1
8	21.09.2021	ER models-III	CO1	8	21.09.2021	ER models-III	CO1

Remarks: **NA**

Signature of Faculty

Date:

Year:II
Semester: III

7. **Name of the Faculty: Mr. PABAK INDU** **Course Code: CSE11412**
8. **Course : Database Management System** **L: 3**
9. **Program : BCA** **T: 0**
10. **Target : 60%** **P: 0**
C: 3

SESSION PLAN
UNIT-II

Session Plan				Actual Delivery			
Lect.	Date	Topics to be Covered	CO Mapped	Lect.	Date	Topics Covered	CO Achieved
1	22.09.2021	Relational algebra	CO2	1	22.09.2021	Relational algebra	CO2
2	27.09.2021	Fundamental Operations -I	CO2	2	27.09.2021	Fundamental Operations -I	CO2
3	28.09.2021	Fundamental Operations –II	CO2	3	28.09.2021	Fundamental Operations –II	CO2
4	29.09.2021	Fundamental Operations –III	CO2	4	29.09.2021	Fundamental Operations –III	CO2
5	04.10.2021	Additional Operations-I	CO2	5	04.10.2021	Additional Operations-I	CO2
6	05.10.2021	Additional Operations-II	CO2	6	05.10.2021	Additional Operations-II	CO2
7	09.10.2021	Additional Operations-III	CO2	7	09.10.2021	Additional Operations-III	CO2
8	18.10.2021	Tuple relational calculus	CO2	8	18.10.2021	Tuple relational calculus	CO2
9	25.10.2021	Domain relational calculus	CO2	9	25.10.2021	Domain relational calculus	CO2

Remarks: **NA**

Signature of Faculty

Date:

Year:II
Semester: III

7. **Name of the Faculty: Mr. PABAK INDU** **Course Code: CSE11412**
8. **Course : Database Management System** **L: 3**
9. **Program : BCA** **T: 0**
10. **Target : 60%** **P: 0**
C: 3

SESSION PLAN
UNIT-III

Session Plan				Actual Delivery			
Lect.	Date	Topics to be Covered	CO Mapped	Lect.	Date	Topics Covered	CO Achieved
1	26.10.2021	Integrity Constraint, Domain Constrain	CO3	1	26.10.2021	Integrity Constraint, Domain Constrain	CO3
2	01.11.2021	Referential Integrity, Functional Dependencies	CO3	2	01.11.2021	Referential Integrity, Functional Dependencies	CO3
3	02.11.2021	Closure of Set, Cover and Canonical Cover	CO3	3	02.11.2021	Closure of Set, Cover and Canonical Cover	CO3
4	03.11.2021	Types of Anomalies, Armstrong's axioms	CO3	4	03.11.2021	Types of Anomalies, Armstrong's axioms	CO3
5	08.11.2021	Extended Armstrong's axioms Assertions and Demons	CO3	5	08.11.2021	Extended Armstrong's axioms Assertions and Demons	CO3
6	09.11.2021	Data Base Decomposition: Domain and data dependency	CO3	6	09.11.2021	Data Base Decomposition: Domain and data dependency	CO3
7	10.11.2021	Normal forms: 1NF, 2 NF	CO3	7	10.11.2021	Normal forms: 1NF, 2 NF	CO3
8	15.11.2021	Normal forms: 3 NF, BCNF,	CO3	8	15.11.2021	Normal forms: 3 NF, BCNF,	CO3
9	16.11.2021	Dependency preservation	CO3	9	16.11.2021	Dependency preservation	CO3
10	01.12.2021	Lossless design	CO3	10		Lossless design	CO3

Remarks: NA

Signature of Faculty

Date:

Year:II
Semester: III

7. **Name of the Faculty: Mr. PABAK INDU** **Course Code: CSE11412**
8. **Course : Database Management System** **L: 3**
9. **Program : BCA** **T: 0**
10. **Target : 60%** **P: 0**
C: 3

SESSION PLAN
UNIT-IV

Session Plan				Actual Delivery			
Lect.	Date	Topics to be Covered	CO Mapped	Lect.	Date	Topics Covered	CO Achieved
1	06.12.2021	Query processing and optimization	CO4	1		Query processing and optimization	CO4
2	07.12.2021	Evaluation of relational algebra expressions	CO4	2		Evaluation of relational algebra expressions	CO4
3	08.12.2021	Query equivalence	CO4	3		Query equivalence	CO4
4	13.12.2021	Join strategies, Query optimization algorithms.	CO4	4		Join strategies, Query optimization algorithms.	CO4
5	14.12.2021	Indices, B-trees	CO4	5		Indices, B-trees	CO4
6	15.12.2021	B+-trees	CO4	6		B+-trees	CO4
7	20.12.2021	Hashing	CO4	7		Hashing	CO4
8	21.12.2021	File System	CO4	8		File System	CO4
9	22.12.2021	Disk Organization, Physical Storage, Buffer management.	CO4	9		Disk Organization, Physical Storage, Buffer management.	CO4

Remarks: **NA**

Signature of Faculty

Date:

Year:II
Semester: III

7. **Name of the Faculty: Mr. PABAK INDU** **Course Code: CSE11412**
8. **Course : Database Management System** **L: 3**
9. **Program : BCA** **T: 0**
10. **Target : 60%** **P: 0**
C: 3

SESSION PLAN
UNIT-V

Session Plan				Actual Delivery			
Lect.	Date	Topics to be Covered	CO Mapped	Lect.	Date	Topics Covered	CO Achieved
1	03.01.2022	Transaction processing	CO5	1		Transaction processing	CO5
2	04.01.2022	Failure, Recovery from Failure	CO5	2		Failure, Recovery from Failure	CO5
3	05.01.2022	Different States of Transaction, Transaction Isolation	CO5	3		Different States of Transaction, Transaction Isolation	CO5
4	10.01.2022	ACID property	CO5	4		ACID property	CO5
5	11.01.2022	Serializability of scheduling	CO5	5		Serializability of scheduling	CO5
6	12.01.2022	Multi-version and optimistic Concurrency Control schemes.	CO5	6		Multi-version and optimistic Concurrency Control schemes.	CO5
7	17.01.2022	Concurrency control: Locking and timestamp-based schedulers, 2-Phase Locking Protocol	CO5	7		Concurrency control: Locking and timestamp-based schedulers, 2-Phase Locking Protocol	CO5
8	18.01.2022	Dead Lock	CO5	8		Dead Lock	CO5
9	19.01.2022	Database Security: Authentication, Authorization and access control, DAC, MAC and RBAC models, Intrusion detection, SQL injection.	CO5	9		Database Security: Authentication, Authorization and access control, DAC, MAC and RBAC models, Intrusion detection, SQL injection. Advanced topics: Distributed databases, Data warehousing and data mining	CO5

Year:II
Semester: III

7. **Name of the Faculty: Mr. PABAK INDU** **Course Code: CSE11412**
8. **Course : Database Management System** **L: 3**
9. **Program : BCA** **T: 0**
10. **Target : 60%** **P: 0**
C: 3

		Advanced topics: Distributed databases, Data warehousing and data mining					

Remarks: **NA** **Signature of Faculty**

Date: 10.02.2021

Year:II
Semester: III

7. Name of the Faculty: Mr. PABAK INDU — Course Code: CSE11412
8. Course : Database Management System — L: 3
9. Program : BCA — T: 0
10. Target : 60% — P: 0
C: 3

PERIODIC MONITORING

Actual date of completion and remarks, if any

Components		From	To	From	To
Duration (Mention from and to Dates)					
Percentage of Syllabus covered					
Lectures	Planned				
	Taken				
Tutorials	Planned				
	Taken				
Test/Quizzes/ Mid Semester/ End Semester	Planned				
	Taken				
	CO's Addressed				
	CO's Achieved				
Assignments	Planned				
	Taken				
	CO's Addressed				
	CO's Achieved				
Signature of Faculty					
Head of the Department					
OBE Coordinator					

Signature of HOD/ Dean

Date

Signature of Faculty

Date

Year:II
Semester: III

7. Name of the Faculty: Mr. PABAK INDU — Course Code: CSE11412
8. Course : Database Management System — L: 3
9. Program : BCA — T: 0
10. Target : 60% — P: 0
C: 3

PERIODIC MONITORING

Attainment of the Course (Learning) Outcomes:

Components	Attainment level	Action Plan	Remarks
Assignment	CO1:		
	CO2:		
	CO3:		
	CO4:		
	CO5:		
Quiz/Test etc.	CO1:		
	CO2:	-	
	CO3:		
	CO4:		
	CO5:		
Mid Semester	CO1:		
	CO2:		
	CO3:		
	CO4:		
	CO5:		
End Semester	CO1:		
	CO2:		
	CO3:		
	CO4:		
	CO5:		

Signature of HOD/ Dean

Date

Signature of Faculty

Date

Year:II
Semester: III

7. Name of the Faculty: Mr. PABAK INDU — Course Code: CSE11412
8. Course : Database Management System — L: 3
9. Program : BCA — T: 0
10. Target : 60% — P: 0
C: 3

Previous Year Question Papers – Set 1

NA

Previous Year Question Papers – Set 2

NA

Question Bank Sample

School: SOET — Department: CSE
Course Code: CSE11412 — Course Name: Database Management Systems
Program: Bachelor of Computer Application — Semester: III

UNIT-I

Sl. No.	Question	Level of Difficulty (Easy/ Medium/ Difficult)	Knowledge Level (Bloom's Taxonomy)	Course Outcome (CO)
	Part A (Multiple Choice Questions) (1 mark each)			
1.	List the advantages of DBMS?	**Easy**	**Knowledge**	**1**
2.	List the database Applications?	**Medium**	**Knowledge**	**2**
3.	Discuss Data Independence?	**Difficult**	**Understand**	**2**
	PartB (Definition/Naming Questions) (2 marks each)			
1.	Define Data Abstraction and discuss levels of Abstraction?	**Easy**	**Knowledge**	**2**
2.	Describe the Structure of DBMS?	**Medium**	**Understand**	**1**
3.	Discuss about the logical database Design?	**Difficult**	**Understand**	**2**
	PartC (Short Questions) (3-4 marks each)			
1.	Explain about different types of integrity constraints?	**Easy**	**Understand**	**1**

Year:II
Semester: III

7. Name of the Faculty: Mr. PABAK INDU **Course Code: CSE11412**
8. Course : Database Management System **L: 3**
9. Program : BCA **T: 0**
10. Target : 60% **P: 0**
C: 3

2.	Differentiate relation schema and relational instance? Define the terms arity and degree of s relation? What are domain constraints?	**Medium**	**Understand**	**2**
3.	Describe logical connectives of SQL?	**Difficult**	**Understand**	**3**
PartD (Explanation Based Questions) (5 marks each)				
1.	Explain different types of database users and write the functions of DBA?	**Easy**	**Understand**	**2**
2.	Write about views and updates on views?	**Medium**	**Knowledge**	**2**
3.	Discuss about active databases?	**Difficult**	**Understand**	**1**
PartE (Questions Based on Reasoning) (5 marks each)				
1.	Discuss Transaction management?	**Easy**	**Understand**	**2**
2.	Explain the Query Processor?	**Medium**	**Understand**	**2**
3.	Discuss how can you change the data in the table?	**Difficult**	**Understand**	**2**
PartF (Application Based Questions) (5-10 marks each)				
1.	Let E1 and E2 be two entities in an E/R diagram with simple single-valuedattributes. R1 and R2 are two relationships between E1 and E2, where R1 is oneto-manyand R2 is many-to-many. R1 and R2 do not have any attributes of theirown. Calculate the minimum number of tables required to represent this situationin the relational model?	**Easy**	**Understand**	**3**
2.	Find whether View exists if the table is dropped from the database?	**Medium**	**Knowledge**	**2**
3.	We can convert any weak entity set to strong entity set by simply addingappropriate attributes. find why, then, do we have weak entity sets?	**Difficult**	**Understand**	**4**
PartG (Short Notes) (5 marks each)				
1.	Domain constraints.	**Easy**	**Knowledge**	**2**
2.	Referential integrity constraints.	**Medium**	**Knowledge**	**1**
3.	Relational model.	**Difficult**	**Knowledge**	**3**

Year:II
Semester: III

7. Name of the Faculty: Mr. PABAK INDU — Course Code: CSE11412
8. Course : Database Management System — L: 3
9. Program : BCA — T: 0
10. Target : 60% — P: 0
C: 3

School: SOET — Department: CSE
Course Code: CSE11412 — Course Name: Database Management Systems
Program: Bachelor of Computer Application — Semester: III

UNIT-II

Sl. No.	Question	Level of Difficulty (Easy/ Medium/ Difficult)	Knowledge Level (Bloom's Taxonomy)	Course Outcome (CO)
	Part A (Multiple Choice Questions) (1 mark each)			
1.	Define relational database query?	**Easy**	**Knowledge**	**2**
2.	State about PROJECT operation in Relational algebra?	**Medium**	**Knowledge**	**4**
3.	Define Aggregate Functions?	**Difficult**	**Knowledge**	**3**
	PartB (Definition/Naming Questions) (2 marks each)			
1.	Define Join? Explain different types of joins?	**Easy**	**Knowledge**	**2**
2.	Discuss about Domain Relational calculus in detail?	**Medium**	**Understand**	**4**
3.	Illustrate Group by and Having clauses with examples?	**Difficult**	**Apply**	**3**
	PartC (Short Questions) (3-4 marks each)			
1.	Discuss about Complex integrity constraints in SQL?	**Easy**	**Understand**	**2**
2.	Discuss different types of aggregate operators with examples in SQL?	**Medium**	**Understand**	**3**
3.	a. Discuss correlated nested queries? b. Write a query to find the names of sailors who have reserved a red boat? c. Write a query to find the names of sailors who have not reserved a red boat?	**Difficult**	**Understand**	**4**
	PartD (Explanation Based Questions) (5 marks each)			
1.	a. Explain Relational calculus?	**Easy**	**Understand**	**4**

Year:II
Semester: III

7. Name of the Faculty: Mr. PABAK INDU — Course Code: CSE11412
8. Course : Database Management System — L: 3
9. Program : BCA — T: 0
10. Target : 60% — P: 0
C: 3

	b. Write a TRC query to find the names of sailors who have reserved boat 103? c. Write a DRC query to find the names of sailors who have reserved boat 103?			
2.	a. Define a nested query? b. Write a nested query to find the names of sailors who have reserved both ared and green boat? c. Write a nested query to find the names of sailors who have reserved allboats?	**Medium**	**Knowledge**	**2**
3.	Implement Various relational algebraic operations	**Difficult**	**Apply**	**2**
PartE (Questions Based on Reasoning) (5 marks each)				
1.	What are relational set operations	**Easy**	**Knowledge**	**2**
2.	Why nested queries are required	**Medium**	**Knowledge**	**3**
3.	Describe about view and integrity constraints	**Difficult**	**Understand**	**1**
PartF (Application Based Questions) (5-10 marks each)				
1.	Explain about the trigger	**Easy**	**Understand**	**2**
2.	Explain with suitable examples 1:1 and M:N relationship types.	**Medium**	**Apply**	**3**
3.	With a neat diagram explain the different phases of database design	**Difficult**	**Understand**	**4**
PartG (Short Notes) (5 marks each)				
1.	Weak entity.	**Easy**	**Understand**	**2**
2.	Strong Entity.	**Medium**	**Understand**	**1**
3.	Entity Set	**Difficult**	**Understand**	**3**

Year:II
Semester: III

7. Name of the Faculty: Mr. PABAK INDU — Course Code: CSE11412
8. Course : Database Management System — L: 3
9. Program : BCA — T: 0
10. Target : 60% — P: 0
C: 3

School: SOET **Department: CSE**
Course Code: CSE11412 **Course Name: Database Management Systems**
Program: Bachelor of Computer Application **Semester: III**

UNIT-III

Sl. No.	Question	Level of Difficulty (Easy/ Medium/ Difficult)	Knowledge Level (Bloom's Taxonomy)	Course Outcome (CO)
	Part A (Multiple Choice Questions) (1 mark each)			
1.	Define redundancy?	**Easy**	**Knowledge**	**2**
2.	Discuss Domain-Key Normal Form?	**Medium**	**Understand**	**4**
3.	Explain the concept scheme refinement in database design?	**Difficult**	**Understand**	**1**
	PartB (Definition/Naming Questions) (2 marks each)			
1.	Define functional dependency? Why are some functional dependencies trivial?	**Easy**	**Knowledge**	**5**
2.	Define functional dependencies.How are primary keys related to FD's?	**Medium**	**Knowledge**	**2**
3.	Explain about Schema refinement in Database design?	**Difficult**	**Understand**	**1**
	PartC (Short Questions) (3-4 marks each)			
1.	Discuss normalization?	**Easy**	**Understand**	**4**
2.	Explain about multi-valued dependencies?	**Medium**	**Understand**	**3**
3.	Illustrate Inclusion dependencies with example?	**Difficult**	**Apply**	**2**
	PartD (Explanation Based Questions) (5 marks each)			
1.	Illustrate functional dependency with example?	**Easy**	**Apply**	**1**
2.	Given the Students relation as shown below *StudentID* | *StudentName* | *StudentEmail* | *StudentAge* | *CPI* 2345 | Shankar | shankar@math | X | 9.4 1287 | Swati | swati@ee | 19 | 9.5 7853 | Shankar | shankar@cse | 19 | 9.4 9876 | Swati | swati@mech | 18 | 9.3 8765 | Ganesh | ganesh@civil | 19 | 8.7	**Medium**	**Understand**	**4**

Year:II
Semester: III

7. Name of the Faculty: Mr. PABAK INDU **Course Code: CSE11412**
8. Course : Database Management System **L: 3**
9. Program : BCA **T: 0**
10. Target : 60% **P: 0**
C: 3

	For (Student Name, Student Age) to be the key for this instance, analyze and findvalue of X not be equal to?			
3.	Consider a relation scheme R = (A, B, C, D, E, H) on which the followingfunctional dependencies hold: {A–>B, BC–> D, E–>C, D–>A}. Write the candidate keys of R?	**Difficult**	**Apply**	**3**
PartE (Questions Based on Reasoning) (5 marks each)				
1.	Define Armstrong axioms for FD's?	**Easy**	**Knowledge**	**2**
2.	List out the Problems related to decompositions?	**Medium**	**Knowledge**	**1**
3.	Explain about inclusion dependency?	**Difficult**	**Understand**	**3**
PartF (Application Based Questions) (5-10 marks each)				
1.	Consider the following relational schemes for a library database: Book (Title, Author, Catalog_no, Publisher, Year, Price) Collection (Title, Author, Catalog_no) the following are functional dependencies: a. Title Author -->Catalog_no b. Catalog_no --> Title Author Publisher Year c. Publisher Title Year --> Price d. Assume {Author, Title} is the key for both schemes. Apply theappropriate normal form for Book and Cancellation?	**Easy**	**Apply**	**4**
22.	Show that: if $\alpha \rightarrow \beta$ and $\alpha \rightarrow \gamma$ then $\alpha \rightarrow \beta\gamma$	**Medium**	**Knowledge**	**5**
3.	Write SQL Query to find second highest salary of Employee from Employee table?	**Difficult**	**Knowledge**	**1**
PartG (Short Notes) (5 marks each)				
1.	Key and super Key	**Easy**	**Understand**	**2**
2.	Degree and cardinality	**Medium**	**Understand**	**4**
3.	DML	**Difficult**	**Understand**	**3**

Year:II
Semester: III

7. Name of the Faculty: Mr. PABAK INDU — Course Code: CSE11412
8. Course : Database Management System — L: 3
9. Program : BCA — T: 0
10. Target : 60% — P: 0
C: 3

School: SOET — Department: CSE
Course Code: CSE11412 — Course Name: Database Management Systems
Program: Bachelor of Computer Application — Semester: III

UNIT-IV

Sl. No.	Question	Level of Difficulty (Easy/ Medium/ Difficult)	Knowledge Level (Bloom's Taxonomy)	Course Outcome (CO)
	Part A (Multiple Choice Questions) (1 mark each)			
1.	Discuss cascade less schedules?	**Easy**	**Understand**	**2**
2.	Define Two Phase Commit protocol?	**Medium**	**Knowledge**	**4**
3.	Demonstrate the implementation of Isolation?	**Difficult**	**Apply**	**1**
	PartB (Definition/Naming Questions) (2 marks each)			
1.	Define a Transaction? List the properties of transaction?	**Easy**	**Knowledge**	**3**
2.	Discuss different phases of transaction?	**Medium**	**Understand**	**2**
3.	Explain about different types of locks?	**Difficult**	**Understand**	**1**
	PartC (Short Questions) (3-4 marks each)			
1.	Discuss about Failure Classification?	**Easy**	**Understand**	**3**
2.	Discuss the failures that can occur with loss of Non-volatile storage?	**Medium**	**Understand**	**2**
3.	Demonstrate Conflict Serializability?	**Difficult**	**Apply**	**1**
	PartD (Explanation Based Questions) (5 marks each)			
1.	Discuss View Serializability?	**Easy**	**Understand**	**4**
2.	Explain about transition states?	**Medium**	**Understand**	**5**

Year:II
Semester: III

7. **Name of the Faculty: Mr. PABAK INDU** **Course Code: CSE11412**
8. **Course : Database Management System** **L: 3**
9. **Program : BCA** **T: 0**
10. **Target : 60%** **P: 0**
C: 3

3.	Explain about acid properties?	**Difficult**	**Understand**	**1**
PartE (Questions Based on Reasoning) (5 marks each)				
1.	Explain about locking protocols?	**Easy**	**Understand**	**2**
2.	Define timestamp-based protocol?	**Medium**	**Understand**	**3**
3.	Explain about multiple granularity?	**Difficult**	**Understand**	**5**
PartF (Application Based Questions) (5-10 marks each)				
1.	Discuss How do you implement Atomicity and Durability?	**Easy**	**Understand**	**1**
2.	Discuss Serializability in detail?	**Medium**	**Understand**	**3**
3.	Discuss two phase locking protocol and strict two phase locking protocols?	**Difficult**	**Understand**	**4**
PartG (Short Notes) (5 marks each)				

1.	Consider the following transactions with data items P and Q initialized to zero:
	T1: read(P); read(Q);
	If P=0 then Q:=Q+1;
	write(Q);
	T2: read(Q);
	read(P);
	If Q=0 then P:=P+1;
	write(P);
	Solve and find any non-serial interleaving of T1 and T2 for concurrent executionleads to a serializable schedule or non serializable schedule. Explain?
		Easy	**Apply**	**3**

2.	Recovery manager.	**Medium**	**Understand**	**5**
3.	Cascading rollback.	**Difficult**	**Understand**	**1**

Year:II
Semester: III

7. Name of the Faculty: Mr. PABAK INDU — Course Code: CSE11412
8. Course : Database Management System — L: 3
9. Program : BCA — T: 0
10. Target : 60% — P: 0
C: 3

School: SOET — Department: CSE
Course Code: CSE11412 — Course Name: Database Management Systems
Program: Bachelor of Computer Application — Semester: III

UNIT-V

Sl. No.	Question	Level of Difficulty (Easy/ Medium/ Difficult)	Knowledge Level (Bloom's Taxonomy)	Course Outcome (CO)
	Part A (Multiple Choice Questions) (1 mark each)			
1.	Discuss about data on External storage?	**Easy**	**Understand**	**4**
2.	Explain Clustered Indexes?	**Medium**	**Understand**	**1**
3.	Define Tree Indexing?	**Difficult**	**Knowledge**	**2**
	PartB (Definition/Naming Questions) (2 marks each)			
1.	Explain Hash based Indexing?	**Easy**	**Understand**	**5**
2.	Discuss the intuition for Tree Indexes?	**Medium**	**Understand**	**1**
3.	Discuss about Overflow pages and Locking considerations of ISAM?	**Difficult**	**Understand**	**2**
	PartC (Short Questions) (3-4 marks each)			
1.	Explain about several ordered indexing?	**Easy**	**Understand**	**2**
2.	Discuss the impact of Workload on Indexes?	**Medium**	**Knowledge**	**2**
3.	Define extendable hashing?	**Difficult**	**Knowledge**	**3**
	PartD (Explanation Based Questions) (5 marks each)			
1.	Compare I/O costs for all File Organizations?	**Easy**	**Understand**	**3**
2.	Explain in detail about Extendible Hashing?	**Medium**	**Understand**	**4**

Year:II
Semester: III

7. Name of the Faculty: Mr. PABAK INDU — Course Code: CSE11412
8. Course : Database Management System — L: 3
9. Program : BCA — T: 0
10. Target : 60% — P: 0
C: 3

3.	Compare and Contrast Extendible Hashing with Linear Hashing?	**Difficult**	**Apply**	**1**
PartE (Questions Based on Reasoning) (5 marks each)				
1.	Write in detail about Hash based Indexing and Tree based Indexing?	**Easy**	**Understand**	**4**
2.	Discuss about this Dynamic Index Structure?	**Medium**	**Understand**	**5**
3.	Explain Channing.	**Difficult**	**Knowledge**	**1**
PartF (Application Based Questions) (5-10 marks each)				
1.	Briefly describe about lock-based protocols	**Easy**	**Knowledge**	**2**
2.	What is buffer management?	**Medium**	**Understand**	**3**
3.	What is Remote backup system?	**Difficult**	**Understand**	**1**
PartG (Short Notes) (5 marks each)				
1.	B Tree	**Easy**	**Understand**	**4**
2.	B+ Tree	**Medium**	**Understand**	**4**
3.	RAID	**Difficult**	**Understand**	**2**

Lecture Notes – Sample

https://riceindia-my.sharepoint.com/:f:/g/personal/pabak_indu_adamasuniversity_ac_in/EsKZlVPaY4NLl0fxBtlLXw4BQhsMYIUJU9JuS6t-cxBzVQ?e=MOagC6

Video Lecture Link

https://riceindia-

Internal Assessment – Assignment

Year:II
Semester: III

7. **Name of the Faculty: Mr. PABAK INDU** **Course Code: CSE11412**
8. **Course : Database Management System** **L: 3**
9. **Program : BCA** **T: 0**
10. **Target : 60%** **P: 0**
C: 3

Year:II
Semester: III

7. Name of the Faculty: Mr. PABAK INDU — Course Code: CSE11412
8. Course : Database Management System — L: 3
9. Program : BCA — T: 0
10. Target : 60% — P: 0
C: 3

For self ref.

Year:II
Semester: III

7. **Name of the Faculty: Mr. PABAK INDU** — **Course Code: CSE11412**
8. **Course : Database Management System** — **L: 3**
9. **Program : BCA** — **T: 0**
10. **Target : 60%** — **P: 0**
C: 3

	ADAMAS UNIVERSITY **INTERNAL EXAMINATION** (Academic Session: 2020 – 21)		
Name of the Program:	MCA	**Semester:** (I/III/ V/ VII/IX)	II
Paper Title:	Database Management Systems	**Paper Code:**	CSE21911
Maximum Marks:	20	**Time Duration:**	1 Hrs
Total No. of Questions:	**4**	**Total No of Pages:**	1
(Any other information for the student may be mentioned here)	**1.** At top sheet, clearly mention Name, Univ. Roll No., Enrolment No., Paper Name & Code, Date of Exam.		

Year:II
Semester: III

7. **Name of the Faculty: Mr. PABAK INDU** **Course Code: CSE11412**
8. **Course : Database Management System** **L: 3**
9. **Program : BCA** **T: 0**
10. **Target : 60%** **P: 0**
C: 3

	2. All parts of a Question should be answered consecutively. Each Answer should start from a fresh page. **3.** Assumptions made if any, should be stated clearly at the beginning of your answer.

Answer all the Questions

1. Design an ER Diagram with proper cardinality for Hotel Reservation Systems? 5 [CO4]
2. Explain ACID property? 5[CO5]
3. Explain Deadlock recovery techniques? 5[CO3]
4. Explain Hashing? 5[CO5]

Answer Sample

https://riceindia-my.sharepoint.com/:f:/g/personal/pabak_indu_adamasuniversity_ac_in/EskSbWZ5W91NoUbp-oPn57MBzYk8APAwaIdF0uPAzKCmNA?e=uneLiM

ADAMAS UNIVERSITY PURSUE EXCELLENCE	**ADAMAS UNIVERSITY** **MID-SEMESTER EXAMINATION** (Academic Session: 2020 – 21)		
Name of the Program:	MCA	**Semester:**	II
Paper Title:	Database Management Systems	**Paper Code:**	CSE21911
Maximum Marks:	20	**Time Duration:**	2 Hrs
Total No. of Questions:	**11**	**Total No of Pages:**	2
(Any other information for the student may be mentioned here)	1. At top sheet, clearly mention Name, Univ. Roll No., Enrolment No., Paper Name & Code, Date of Exam. 2. All parts of a Question should be answered consecutively. Each Answer should start from a fresh page. 3. Assumptions made if any, should be stated clearly at the beginning of your answer.		

Year:II
Semester: III

7. **Name of the Faculty: Mr. PABAK INDU** **Course Code: CSE11412**
8. **Course : Database Management System** **L: 3**
9. **Program : BCA** **T: 0**
10. **Target : 60%** **P: 0**
C: 3

Group A Answer All the Questions (5 x 1 = 5)			
1	What is Domain of an Attribute?	**Remember**	**CO2**
2	Explain Left Outer Join with example?	**Understand**	**CO3**
3	Define Super Key?	**Understand**	**CO2**
4	Explain Logical View Level in DBMS?	**Remember**	**CO1**
5	What is Data Base Schema?	**Remember**	**CO1**
Group B Answer All the Questions (3 x 5 = 15)			
6 a)	Design an ER Diagram with proper cardinality for University Management Systems?	**Remember**	**CO2**
(OR)			
6 b)	Design an ER Diagram with proper cardinality for Railway Reservation Systems?	**Remember**	**CO2**
7 a)	Book(acc no, yr_pub, title) User(card no, bname, baddress) Borrow(acc no, doi, card_ no) where acc_ no is accession number, yr_pub is year of publication, bname is borrower name, baddress is borrower address, doi is date of issue. Perform the following queries on the table.(In Relational Algebra) (i) Find the accession number whose year of publication is 2000. (ii) Display the title of the book which has been borrowed by "Vijoy". (iii) Find the borrower name who lives in same city as "Vijoy". (iv) Find the borrower name and address who should issue book on 14-05-2010. (v) Find the acc_ no of Book whose year of publication is 2000 and title is "Compiler Design".	**Apply**	**CO3**

Year:II
Semester: III

7. Name of the Faculty: Mr. PABAK INDU **Course Code: CSE11412**
8. Course : Database Management System **L: 3**
9. Program : BCA **T: 0**
10. Target : 60% **P: 0**
C: 3

	(OR)		
7 b)	Employee(EMPID int, EMP_age int, City varchar(10),Salary int) 1. Find the Employees whose name starts with "A". 2. Find the employee with salary between 30000 to 40000. 3. Find the no of employees working from "Kolkata" location. 4. Find the city wise total salary expenditure for the employees. 5. Find the highest amount of salary for the employees.	**Apply**	**CO3**
8 a)	Write a Short Note on: Hierarchical Model	**Understand**	**CO2**
	(OR)		
8 b)	Write a Short Note on: Network Model	**Understand**	**CO2**

Evaluation Sheet – Mid Semester

Roll Number	Registration Number	Name of the Student	Marks (20)
PG/02/MCA/2020/001	AU/2020/0004456	NAMRATA SAMANTA	13
PG/02/MCA/2020/002	AU/2020/0004534	SAYANI DAS	18
PG/02/MCA/2020/003	AU/2020/0004545	DEEPIKA BARUA	18
PG/02/MCA/2020/004	AU/2020/0004551	J SAGAR SINGH	18
PG/02/MCA/2020/005	AU/2020/0004573	SANTANU SOO	16
PG/02/MCA/2020/006	AU/2020/0004585	OLIVA ROY	15
PG/02/MCA/2020/007	AU/2020/0004590	UJJAL DEY SARKAR	15
PG/02/MCA/2020/008	AU/2020/0004592	SUMITA CHOUBEY	17
PG/02/MCA/2020/009	AU/2020/0004594	ANKIT KUMAR SHAH	14
PG/02/MCA/2020/010	AU/2020/0004599	SOHAM DAS	15
PG/02/MCA/2020/011	AU/2020/0004602	SURAJ AGARWAL	AB
PG/02/MCA/2020/012	AU/2020/0004603	TANMOY ADHIKARY	AB

Signature of HOD/Dean **Signature of Faculty**

Year:II
Semester: III

7. Name of the Faculty: Mr. PABAK INDU — Course Code: CSE11412
8. Course : Database Management System — L: 3
9. Program : BCA — T: 0
10. Target : 60% — P: 0
C: 3

Date: Date:

Planning for Remedial Classes – Mid Semester

Sl. No.	Name of Student	Roll No.	Reg. No.	Mid Sem Marks	Remedial Classes Held			Class test on the basis of Remedial Classes	End Sem Marks	Improvement (Y/N)
					Date	24.05.2021	26.05.2021	28.05.2021		
					Venue	Teams				
					Time	12:30-1:30	12:30-1:30			

Year:II
Semester: III

7. **Name of the Faculty: Mr. PABAK INDU** **Course Code: CSE11412**
8. **Course : Database Management System** **L: 3**
9. **Program : BCA** **T: 0**
10. **Target : 60%** **P: 0**
C: 3

1.	SURAJ AGARWAL	PG/02/MCA/2020/011	AU/2020/0004602	AB	AB	AB	AB	AB	NA
2.	TANMOY ADHIKARY	PG/02/MCA/2020/012	AU/2020/0004603	AB	AB	AB	AB	AB	NA

Signature of HOD/ Dean **Signature of Faculty**

Date: **Date:**

Evaluation Sheet – Internal Assessment

Roll Number	Registration Number	Name of the Student	Internal Assessment (30)			
			Assignment (5)	Class Test (10)	Presen--tation (15)	Total
PG/02/MCA/2020/001	AU/2020/0004456	NAMRATA SAMANTA	3	6	9	18
PG/02/MCA/2020/002	AU/2020/0004534	SAYANI DAS	5	9	13	27
PG/02/MCA/2020/003	AU/2020/0004545	DEEPIKA BARUA	5	9	14	28
PG/02/MCA/2020/004	AU/2020/0004551	J SAGAR SINGH	5	8	12	25
PG/02/MCA/2020/005	AU/2020/0004573	SANTANU SOO	3	8	12	23
PG/02/MCA/2020/006	AU/2020/0004585	OLIVA ROY	4	8	12	24
PG/02/MCA/2020/007	AU/2020/0004590	UJJAL DEY SARKAR	4	8	11	23
PG/02/MCA/2020/008	AU/2020/0004592	SUMITA CHOUBEY	4	8	12	24

Year:II
Semester: III

7. **Name of the Faculty: Mr. PABAK INDU** **Course Code: CSE11412**
8. **Course : Database Management System** **L: 3**
9. **Program : BCA** **T: 0**
10. **Target : 60%** **P: 0**
C: 3

PG/02/MCA/2020/009	AU/2020/0004594	ANKIT KUMAR SHAH	4	7	10	21
PG/02/MCA/2020/010	AU/2020/0004599	SOHAM DAS	4	7	9	20
PG/02/MCA/2020/011	AU/2020/0004602	SURAJ AGARWAL	AB	AB	AB	AB
PG/02/MCA/2020/012	AU/2020/0004603	TANMOY ADHIKARY	AB	AB	AB	AB

Signature of HOD/Dean **Signature of Faculty**

Date: **Date:**

COURSE END SURVEY

INDIRECT ASSESSMENT

Sample format for Indirect Assessment of Course outcomes:

NAME: ***
ROLL NO.: ****
REG. NO..: ****
COURSE: Database Management System

Year:II
Semester: III

7. Name of the Faculty: Mr. PABAK INDU **Course Code: CSE11412**
8. Course : Database Management System **L: 3**
9. Program : BCA **T: 0**
10. Target : 60% **P: 0**
C: 3

PROGRAM: MCA

Please rate the following aspects of course outcomes of

Use the scale 1-5 (Poor – Excellent)

Course Outcomes	Statement	1	2	3	4	5
CO1	Understand the impact of software engineering.					5
CO2	Communicate with proper software model paradigm to pupils.					5
CO3	Enhancement of software metric engineering application in industry.					5
CO4	Compare Effectively testing and maintenance of software project.					5
CO5	Classify software metric analysis for an effective model.					5

INDIRECT ASSESSMENT CONSOLIDATION

ADAMAS UNIVERSITY, KOLKATA
SCHOOL OF
DEPARTMENT OF
CO Indirect Assessment

Programme: MCAAcademic Year:2020-21 **Batch: 2020-22**

6. Course Code & Name: Database Management System & CSE21911

Year:II
Semester: III

7. **Name of the Faculty: Mr. PABAK INDU** — **Course Code: CSE11412**
8. **Course : Database Management System** — **L: 3**
9. **Program : BCA** — **T: 0**
10. **Target : 60%** — **P: 0**
C: 3

Course Outcome	Students Feed Back (5)	Attainment (100)
CO1	5	100
CO2	5	100
CO3	5	100
CO4	5	100
CO5	5	100
etc.		
Signature of HOD/Dean **Date:**		**Signature of Faculty** **Date: 18.02.2021**

End Semester Question Papers – Set 1

ADAMAS UNIVERSITY PURSUE EXCELLENCE	**ADAMAS UNIVERSITY** **END SEMESTER EXAMINATION** (Academic Session: 2020 – 21)		
Name of the Program:	MCA	**Semester:** (I/III/ V/ VII/IX)	II

Year:II
Semester: III

7. **Name of the Faculty: Mr. PABAK INDU** — **Course Code: CSE11412**
8. **Course : Database Management System** — **L: 3**
9. **Program : BCA** — **T: 0**
10. **Target : 60%** — **P: 0**
C: 3

Paper Title:	Database Management Systems	**Paper Code:**	CSE21911
Maximum Marks:	50	**Time Duration:**	3 Hrs
Total No. of Questions:	**17**	**Total No of Pages:**	2
(Any other information for the student may be mentioned here)	**4.** At top sheet, clearly mention Name, Univ. Roll No., Enrolment No., Paper Name & Code, Date of Exam. **5.** All parts of a Question should be answered consecutively. Each Answer should start from a fresh page. **6.** Assumptions made if any, should be stated clearly at the beginning of your answer.		

Group A **Answer All the Questions (5 x 1 = 5)**			
1	What is Domain of an Attribute?	**Remember**	**CO2**
2	Explain equi Join with example?	**Remember**	**CO2**
3	What is deadlock? Explain with explain?	**Remember**	**CO4**
4	Explain many to many cardinality properties with example?	**Remember**	**CO5**
5	What is DML compiler? Explain with example?	**Remember**	**CO1**
Group B **Answer All the Questions (5 x 2 = 10)**			
6 a)	What is Sparse Index?	**Understand**	**CO1**
6 b)	Explain Outer join and Its types?	**Understand**	**CO1**
7 a)	Explain Data Dictionary?	**Remember**	**CO2**
7 b)	What are the different Database abstraction layers?	**Remember**	**CO2**
8 a)	Explain Lossless and Dependency Preserving Decomposition of a Data base?	**Remember**	**CO3**
(OR)			
8 b)	Explain 3rd Normal form using a suitable example?	**Remember**	**CO3**
9 a)	What is Triggers and Demons?	**Remember**	**CO4**
(OR)			
9 b)	Explain Armstong Axioms?	**Understand**	**CO4**
10 a)	What is the highest NF of each of the following relations-Please justify your answer? i) R1 (W, X, Y, Z) with FDs are W →ZY , WX → Z ii) R2 (W, X, Y, Z,P) with FDs are P → WX, PY → Z	**Remember**	**CO5**
(OR)			
10 b)	What is the highest NF of each of the following relations-Please justify your answer?? i) R1 (A, B, D) with FDs are A → BD, B → D ii) R2 (A, B, C, D) with FDs are A → BC, D → C	**Remember**	**CO5**
Group C			

Year:II
Semester: III

7. **Name of the Faculty: Mr. PABAK INDU** — **Course Code: CSE11412**
8. **Course : Database Management System** — **L: 3**
9. **Program : BCA** — **T: 0**
10. **Target : 60%** — **P: 0**
C: 3

Answer All the Questions (7 x 5 = 35)			
11 a)	Design an ER Diagram with proper cardinality for University Management Systems?	**Understand**	**CO4**
	(OR)		
11 b)	Design an ER Diagram with proper cardinality for Railway Reservation Systems?	**Understand**	**CO4**
12 a)	Book(acc no, yr_pub, title) User(card no, bname, baddress) Borrow(acc no, doi, card_ no) where acc_ no is accession number, yr_pub is year of publication, bname is borrower name, baddress is borrower address, doi is date of issue. Perform the following queries on the table.(In Relational Algebra) (i) Find the accession number whose year of publication is 2000. (ii) Display the title of the book which has been borrowed by "Vijoy". (iii) Find the borrower name who lives in same city as "Vijoy". (iv) Find the borrower name and address who should issue book on 14-05-2010. (v) Find the acc_ no of Book whose year of publication is 2000 and title is "Compiler Design".	**Remember**	**CO2**
	(OR)		
12 b)	Employee(EMPID int, EMP_age int, City varchar(10),Salary int) 1. Find the Employees whose name starts with "A". 2. Find the employee with salary between 30000 to 40000. 3. Find the no of employees working from “Kolkata” location. 4. Find the city wise total salary expenditure for the employees. 5. Find the highest amount of salary for the employees.	**Remember**	**CO2**
13 a)	Explain view serializability with proper example?	**Remember**	**CO3**
	(OR)		
13 b)	Explain State diagram of a Transaction?	**Remember**	**CO3**
14 a)	Explain ACID property?	**Remember**	**CO4**
	(OR)		
14 b)	Explain two phase locking protocol?	**Remember**	**CO4**
15 a)	Explain Deadlock recovery techniques?	**Apply**	**CO4**
	(OR)		
15 b)	Explain Deferred Database Modification?	**Apply**	**CO4**
16 a)	Explain Time stamp based protocol?	**Remember**	**CO5**
	(OR)		
16 b)	Explain Fundamental Relational Algebra Operators?	**Remember**	**CO5**

Year:II
Semester: III

7. **Name of the Faculty: Mr. PABAK INDU** — **Course Code: CSE11412**
8. **Course : Database Management System** — **L: 3**
9. **Program : BCA** — **T: 0**
10. **Target : 60%** — **P: 0**, **C: 3**

17 a)	What is Shadow Copy and Shadow paging?	**Apply**	**CO5**
	(OR)		
17 b)	Explain Hashing?	**Apply**	**CO5**

End Semester Question Papers – Set 2

ADAMAS UNIVERSITY PURSUE EXCELLENCE	**ADAMAS UNIVERSITY** **END SEMESTER EXAMINATION** (Academic Session: 2020 – 21)		
Name of the Program:	MCA	**Semester:** (I/III/ V/ VII/IX)	II
Paper Title:	Database Management Systems	**Paper Code:**	CSE21911
Maximum Marks:	50	**Time Duration:**	3 Hrs
Total No. of Questions:	**17**	**Total No of Pages:**	2
(Any other information for the student may be mentioned here)	**7.** At top sheet, clearly mention Name, Univ. Roll No., Enrolment No., Paper Name & Code, Date of Exam. **8.** All parts of a Question should be answered consecutively. Each Answer should start from a fresh page. **9.** Assumptions made if any, should be stated clearly at the beginning of your answer.		

Group A **Answer All the Questions (5 x 1 = 5)**			
1	What is Data Base Schema?	**Remember**	**CO2**
2	Explain Theta Join with example?	**Remember**	**CO2**
3	What is Super key?	**Remember**	**CO4**
4	Explain many to One cardinality properties with example?	**Remember**	**CO5**
5	What is DDL compiler? Explain with example?	**Remember**	**CO1**
Group B **Answer All the Questions (5 x 2 = 10)**			
6 a)	What is Dense Index?	**Understand**	**CO1**
6 b)	Explain Cartesian product?	**Understand**	**CO1**
7 a)	Explain Data Dictionary?	**Remember**	**CO2**
7 b)	What are the different Database abstraction layers?	**Remember**	**CO2**
8 a)	Explain 2nd Normal form using a suitable example?	**Remember**	**CO3**

Year:II
Semester: III

7. **Name of the Faculty: Mr. PABAK INDU** **Course Code: CSE11412**
8. **Course : Database Management System** **L: 3**
9. **Program : BCA** **T: 0**
10. **Target : 60%** **P: 0**
C: 3

	(OR)		
8 b)	Explain BCNF Normal form using a suitable example?	**Remember**	**CO3**
9 a)	What is Assertions?	**Remember**	**CO4**
	(OR)		
9 b)	Explain Armstong Axioms?	**Understand**	**CO4**
10 a)	What is the highest NF of each of the following relations-Please justify your answer? i) R1 (W, X, Y, Z) with FDs are WX →ZY , X → Z,X→Y, X→W ii) R2 (W, X, Y, Z,P) with FDs are P → WXY, PY → Z	**Remember**	**CO5**
	(OR)		
10 b)	What is the highest NF of each of the following relations-Please justify your answer?? i) R1 (A, B, C,D,E,F) with FDs are A → BD, B → EF,D →C. ii) R2 (A, B, C, D) with FDs are AD → B, D → C	**Remember**	**CO5**
	Group C **Answer All the Questions (7 x 5 = 35)**		
11 a)	Design an ER Diagram with proper cardinality for Restaurant Billing Systems?	**Understand**	**CO4**
	(OR)		
11 b)	Design an ER Diagram with proper cardinality for Hotel Reservation Systems?	**Understand**	**CO4**
12 a)	SALESPEOPLE (snum, sname, city, commission) CUSTOMERS (cnum, cname, city, rating, snum) ORDERS (onum, amt, odate, cnum, snum) snum is the salespeople number, sname is the sales persons name, city is the city they belong from, commission is the commission of the salesperson. cnum is the customer name, cname is the customer name, city is the customer city, rating is the customer name, onum is the order number, amt is the amount of the order, odate is the order date. Write SQL statements on the following tables : i) Show the commissions of all the salespersons who receive at least one order of amount greater than Rs. 5,000. ii) Find all customers located in cities where salesperson 'Amit' has customers. iii) Show the orders numbers who gave orders on 16.03.2020. iv) Show the name of the customer names having more than 4 rating. v) Find the customer names whose order amount is more than 10000.	**Remember**	**CO2**
	(OR)		
12 b)	Students(Roll_No int,S_Name Char(20),S_Add varcgar2(20),Phone number(10), C_ID int); Course(C_ID int, C_Name Char(20), C_Duration, Department) Write SQL statements on the following tables : i) Find the names of the students who had enrolled for "MCA" course. ii) Find the students belonging from city "Kolkata". iii) Find the no of students enrolled for the courses for which the course duration is **at least** 4 years.	**Remember**	**CO2**

Year:II
Semester: III

7. **Name of the Faculty: Mr. PABAK INDU** **Course Code: CSE11412**
8. **Course : Database Management System** **L: 3**
9. **Program : BCA** **T: 0**
10. **Target : 60%** **P: 0**
C: 3

	iv) Arrange the courses in an order where the highest no of students in a course will be at the top. v) Arrange the department names in an order that the highest no of courses floated by a department comes at the top.		
13 a)	Explain conflict serializability with proper example?	**Remember**	**CO3**
	(OR)		
13 b)	Explain State diagram of a Transaction?	**Remember**	**CO3**
14 a)	Explain ACID property?	**Remember**	**CO4**
	(OR)		
14 b)	Explain two phase locking protocol?	**Remember**	
15 a)	Explain Deadlock prevention techniques?	**Apply**	**CO4**
	(OR)		
15 b)	Explain Importance of Check points in database?	**Apply**	**CO4**
16 a)	Explain Time stamp based protocol?	**Remember**	**CO5**
	(OR)		
16 b)	Explain Additional Relational Algebra Operators?	**Remember**	**CO5**
17 a)	What is Sequential File index?	**Apply**	**CO5**
	(OR)		
17 b)	Explain B+Tree?	**Apply**	**CO5**

Answer Script Sample

https://riceindia-my.sharepoint.com/:b:/g/personal/pabak_indu_adamasuniversity_ac_in/ETrvzvSySdZJkQ88u_IePf0Bi7IIZLJM_YtcwNMIZt9Pbg?e=LDfF3q

Evaluation Sheet (End Semester)

Roll Number	Registration Number	Name of the Student	Marks (50)
PG/02/MCA/2020/001	AU/2020/0004456	NAMRATA SAMANTA	17
PG/02/MCA/2020/002	AU/2020/0004534	SAYANI DAS	38
PG/02/MCA/2020/003	AU/2020/0004545	DEEPIKA BARUA	44
PG/02/MCA/2020/004	AU/2020/0004551	J SAGAR SINGH	30
PG/02/MCA/2020/005	AU/2020/0004573	SANTANU SOO	33
PG/02/MCA/2020/006	AU/2020/0004585	OLIVA ROY	28

Year:II
Semester: III

7. Name of the Faculty: Mr. PABAK INDU — Course Code: CSE11412
8. Course : Database Management System — L: 3
9. Program : BCA — T: 0
10. Target : 60% — P: 0
C: 3

PG/02/MCA/2020/007	AU/2020/0004590	UJJAL DEY SARKAR	31
PG/02/MCA/2020/008	AU/2020/0004592	SUMITA CHOUBEY	35
PG/02/MCA/2020/009	AU/2020/0004594	ANKIT KUMAR SHAH	29
PG/02/MCA/2020/010	AU/2020/0004599	SOHAM DAS	32
PG/02/MCA/2020/011	AU/2020/0004602	SURAJ AGARWAL	AB
PG/02/MCA/2020/012	AU/2020/0004603	TANMOY ADHIKARY	AB

Signature of HOD/Dean — **Signature of Faculty**

Date: 30.03.2021 — **Date: 30.03.2021**

Planning for Remedial Classes – End Semester

Sl. No.	Name of Student	Roll No.	Reg. No.	End Sem Marks	Remedial Classes Held			Class test on the basis of Remedial Classes	Supple Exam Marks	Improvement (Y/N)
					Date	**	**			
					Venue	**				
					Time	**	**			
**	**	**	**	**	**	**	**	**	**	**

Signature of HOD/ Dean — **Signature of Faculty**

Year:II
Semester: III

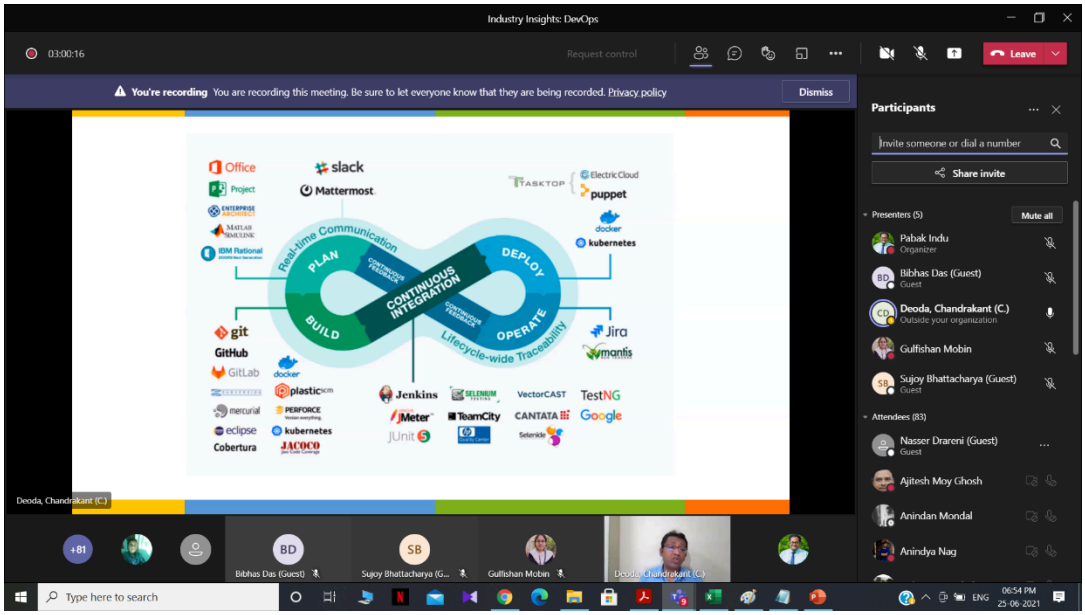
7. **Name of the Faculty: Mr. PABAK INDU** **Course Code: CSE11412**
8. **Course : Database Management System** **L: 3**
9. **Program : BCA** **T: 0**
10. **Target : 60%** **P: 0**
C: 3

Date **Date**

Content Beyond Syllabus

Year:II
Semester: III

7. Name of the Faculty: Mr. PABAK INDU — Course Code: CSE11412
8. Course : Database Management System — L: 3
9. Program : BCA — T: 0
10. Target : 60% — P: 0
C: 3



Consolidated Mark Statement

Roll Number	Registration Number	Name of the Student	Total Marks			
			Mid Semester (20)	Internal Assessment (30)	End Semester (50)	Total (100)
PG/02/MCA/2020/001	AU/2020/0004456	NAMRATA SAMANTA	13	18	17	48
PG/02/MCA/2020/002	AU/2020/0004534	SAYANI DAS	18	27	38	83
PG/02/MCA/2020/003	AU/2020/0004545	DEEPIKA BARUA	18	28	44	90
PG/02/MCA/2020/004	AU/2020/0004551	J SAGAR SINGH	18	25	30	73
PG/02/MCA/2020/005	AU/2020/0004573	SANTANU SOO	16	23	33	72
PG/02/MCA/2020/006	AU/2020/0004585	OLIVA ROY	15	24	28	67
PG/02/MCA/2020/007	AU/2020/0004590	UJJAL DEY SARKAR	15	23	31	69
PG/02/MCA/2020/008	AU/2020/0004592	SUMITA CHOUBEY	17	24	35	76

Year:II
Semester: III

7. Name of the Faculty: Mr. PABAK INDU **Course Code: CSE11412**
8. Course : Database Management System **L: 3**
9. Program : BCA **T: 0**
10. Target : 60% **P: 0**
C: 3

PG/02/MCA/2020/009	AU/2020/0004594	ANKIT KUMAR SHAH	14	21	29	64
PG/02/MCA/2020/010	AU/2020/0004599	SOHAM DAS	15	20	32	67
PG/02/MCA/2020/011	AU/2020/0004602	SURAJ AGARWAL	AB	AB	AB	AB
PG/02/MCA/2020/012	AU/2020/0004603	TANMOY ADHIKARY	AB	AB	AB	AB

Signature of Dean/HOD **Signature of Faculty**

Date: **Date:**

Year:II
Semester: III

7. Name of the Faculty: Mr. PABAK INDU — Course Code: CSE11412
8. Course : Database Management System — L: 3
9. Program : BCA — T: 0
10. Target : 60% — P: 0
C: 3

CO ATTAINMENT – GAP ANALYSIS & REMEDIAL MEASURES

ADAMAS UNIVERSITY, KOLKATA
SCHOOL OF
DEPARTMENT OF
CO ATTAINMENT - GAP ANALYSIS & REMEDIAL MEASURES

Batch :	2020-22		Academic Year: 2020-21
Course Code & Name		Name of the Coordinator	Year & Semester
CSE21911& Database Management System		Mr. PABAK INDU	I & II

CO	Direct Assessment	Indirect Assessment	CO Attainment	Target	CO Attainment Gaps	Action for Bridge the Gap	Target Modification
CO1	75	100	80	**70**	-10		**85**
CO2	75	100	80	**70**	-10		**85**
CO3	75	100	80	**70**	-10		**85**
CO4	75	100	80	**70**	-10		**85**
CO5	75	100	80	**70**	-10		**85**

Signature of HOD/Dean — **Signature of Faculty**

Date: — **Date: 26.04.2021**

Year:II
Semester: III

7. Name of the Faculty: Mr. PABAK INDU — Course Code: CSE11412
8. Course : Database Management System — L: 3
9. Program : BCA — T: 0
10. Target : 60% — P: 0
C: 3

CO-PO ATTAINMENT

ADAMAS UNIVERSITY, KOLKATA
SCHOOL OF
DEPARTMENT OF
CO-PO ATTAINMENT

Programme : MCA	Year & Sem: I & II	Academic Year: 2020-21	Batch:2020-22

Course Code	Course Name	CO-PO	PO1	PO2	PO3	PO4	PO5	PO6	PO 7	PO8	PO 9	PO 10	PO 11	PO 12	PSO 1	PSO 2	PSO 3
CSE21911	Database Management System	Relationship	CO1, CO2, CO3	CO1, CO3	CO2, CO4, CO5	-	CO4, CO5	CO3, CO4, CO5						CO1, C02, C04	CO1, CO2, CO3		CO3, CO4, CO5
		Mapping Value	3	2	3	-	1	3	-	-	-	-	-	2	3	-	2
		Attainment	2.4	1.6	2.4	-	0.8	2.4	-	-	-	-	-	1.6	2.4	-	1.6

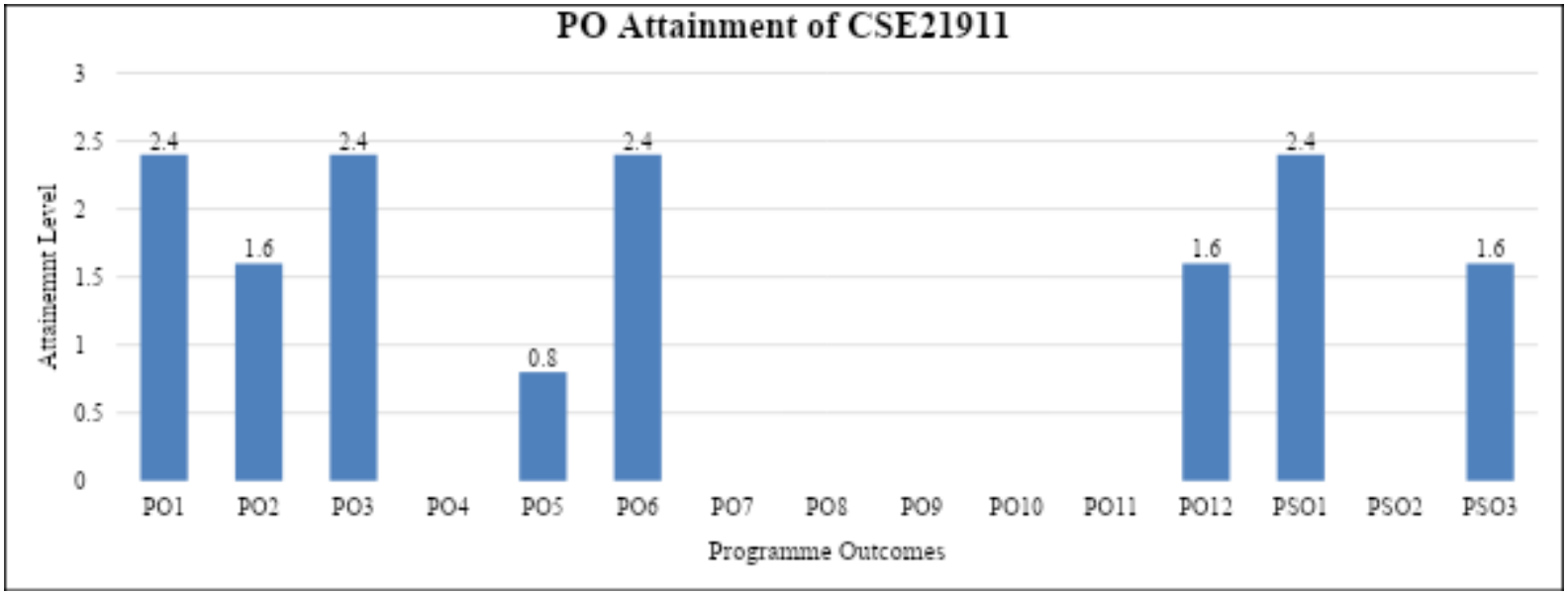
Signature of HOD/Dean — **Signature of Faculty**

Date: — **Date:**

Year:II
Semester: III

7. **Name of the Faculty: Mr. PABAK INDU** **Course Code: CSE11412**
8. **Course : Database Management System** **L: 3**
9. **Program : BCA** **T: 0**
10. **Target : 60%** **P: 0**
C: 3

PO ATTAINMENT OF THE COURSE



Signature of HOD/Dean **Signature of Faculty**

Year:II
Semester: III

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INSTRUCTIONS FOR FACULTY

Instructions for Faculty

- Faculty should keep track of the students with low attendance and counsel them regularly.
- Course coordinator will arrange to communicate the short attendance (as per University policy) cases to the students and their parents monthly.
- Topics covered in each class should be recorded in the table of RECORD OF CLASS TEACHING (Suggested Format).
- Internal assessment marks should be communicated to the students twice in a semester.
- The file will be audited by respective Academic Monitoring and Review Committee (AMRC) members for theory as well as for lab as per AMRC schedule.
- The faculty is required to maintain these files for a period of at least three years.
- This register should be handed over to the head of department, whenever the faculty member goes on long leave or leaves the Colleges/University.
- For labs, continuous evaluation format (break-up given in the guidelines for result preparation in the same file) should be followed.
- Department should monitor the actual execution of the components of continuous lab evaluation regularly.
- Instructor should maintain record of experiments conducted by the students in the lab weekly.
- Instructor should promote students for self-study and to make concept diary, due weightage in the internal should be given under faculty assessment for the same.
- Course outcome assessment: To assess the fulfilment of course outcomes two different approaches have been decided. Degree of fulfillment of course outcomes will be assessed in different ways through direct assessment and indirect assessment. In Direct Assessment, it is measured through quizzes, tests, assignment, Mid-term and/or End-term examinations. It is suggested that each examination is designed in such a way that it can address one or two outcomes (depending upon the course completion). Indirect assessment is done through the student survey which needs to be designed by the faculty (sample format is given below) and it shall be conducted towards the end of course completion. The evaluation of the achievement of the Course Outcomes shall be done by analyzing the inputs received through Direct and Indirect Assessments and then corrective actions suggested for further improvement.
- **Submission Targets of Course Contents:**
  - **S. No. 1 to 8 : Before Starting the Course**
  - **S. No. 9 & 10 : After Mid Semester Examination**
  - **S. No. 11 to 18 : Immediately After End Semester Examination**
  - **S. No. 19 to 22 :After Declaration of Result of the Course**