

RGPV (DIPLOMA WING) BHOPAL		OBE CURRICULUM FOR DATABASE MANAGEMENT SYSTEM		FORMAT- 3	Sheet No. 1/3
Branch	Computer Science and Engineering/Information Technology		Semester	IV	
Course Code	403	Course Name	DATABASE MANAGEMENT SYSTEM		
Course Outcome 1	Understand the Basic concepts and need of Database Management systems including Query Language and Data Model.		Hrs	Marks	
Learning Outcome 1	Identify the need of Database Management systems with the help of Architecture of DBMS.		8	10	
Contents	DBMS Concepts, Database approach v/s Traditional file accessing approach, Advantages of database systems, Database system applications, Three level architecture: Mapping between views, DBMS users, Functions of DBA and designer, Schemas and instances, Data independence.				
Method of Assessment	Question Paper -External- End Sem Theory Exam				
Learning Outcome 2	Elaborate Overall Structure of Database and Query Language.		6	10	
Contents	Data Base Language: Data Definition Language, Data Manipulation Language and Data Control Language, Overall Database Structure.				
Method of Assessment	Question Paper -Internal Progressive Test				
Learning Outcome 3	Classify Data Model and give Example of Entity Relation Data Model.		8	10	
Contents	Introduction and Classification of Data Model, Comparison between the three types of models, ER data model: Entities and attributes, Entity types, Relationship among entities, representation of association & relationship, Defining the E-R diagram, Concept of Generalization, Aggregation and Specialization, keys.				
Method of Assessment	Question Paper -External- End Sem Theory Exam				
Learning Outcome 4	Explain Relational Model and Codd's Relational database Rules.		8	10	
Contents	Relational Model: Attributes and Domains, tuples, relations and their schemas, relation representation, relationship, integrity rules (Primary, Unique, Candidate, Check, Foreign key), Transforming ER diagram into the tables, Codd's Relational database rules.				
Method of Assessment	Question Paper -External- End Sem Theory Exam				

Course Outcome 2	Design Data Base with the help of various Relational algebra Operations and Normal Forms.	Hrs	Marks
Learning Outcome 1	Define various Relational algebra Operations.	8	10
Contents	Relational algebra and relational calculus, Relational algebra Basic operations like select, Project, Union ,set difference, Cartesian product, rename and additional operations like Set intersection, Natural Join, Division ,Join(Left, right and Full) .		
Method of Assessment	Question Paper -External- End Sem Theory Exam		
Learning Outcome 2	Compare Relational algebra and relational calculus Query Language.	8	10
Contents	Introduction and Comparison of relational calculus i.e. Tuple oriented and domain oriented relational calculus		
Method of Assessment	Question Paper-Internal Progressive Test		
Learning Outcome 3	Identify Functional dependency and Referential integrity.	8	10
Contents	Functional dependency: Definition, inference axioms for functional dependency, closure, cover and equivalence of FD, Referential integrity		
Method of Assessment	Question Paper -External- End Sem Theory Exam		
Learning Outcome 4	Build Data Base with the help of Normal Forms.	10	10
Contents	Data Base Design : Concept of Normalization , Decomposition i.e Lossless or Lossy Decomposition, Normal forms, 1 NF, Data anomalies in 1 NF, Partial dependency, 2 NF, Data anomalies in 2 NF , Transitive Dependency, 3NF, Data anomalies in 3 NF, Boyce-Codd Normal Form.		
Method of Assessment	Question Paper -External- End Sem Theory Exam		
Course Outcome 3	Develop Query Based Data Base Applications.	Hrs	Marks
Learning Outcome 1	Build Data Base and Tables with the help of DDL.	9	10

Contents	Introduction to my SQL language, Structure of my SQL statements & my SQL writing guidelines, Data Definition commands: Creating a Database, Show, Creating a Table ,Use, Altering the Database, Altering the Table, RENAME, DESCRIBE, Dropping the Database, Dropping the Table, TRUNCATE.		
Method of Assessment	Lab Manual -External Practical		
Learning Outcome 2	Modify Data Base and Tables with the help of DML.	9	10
Contents	Data Manipulation Statements: SELECT statement that are described in (FROM, WHERE, GROUP BY, HAVING, ORDER BY),INSERT, UPDATE, DELETE, REPLACE.		
Method of Assessment	External Practical		
Learning Outcome 3	Make use of Aggregate Functions and Various Constraints.	9	10
Contents	Aggregate Function (AVG, COUNT, MAX, MIN, SUM). Defining primary keys, foreign keys, Unique Keys, CHECK constraints in a table, removing constraints from table.		
Method of Assessment	External Practical		
Learning Outcome 4	Conclude Various Joins Operations and View statements.	9	10
Contents	Joins (INNER, OUTER, SELF) and SELF Join, View (CREATE VIEW Statement, ALTER VIEW Statement , DROP VIEW Statement.		
Method of Assessment	Lab Manual -Internal Practical- lab work		
Course Outcome 4	Outline Advance Database Concepts.	Hrs	Marks
Learning Outcome 1	Explain Trigger and Database Connectivity to various languages.	09	10
Contents	Overview of Trigger with example, Database Connectivity with Various Languages		

Method of Assessment	Internal Practical- lab work		
Learning Outcome 2	Define Transaction, concurrency control, Object and Cloud based Database.	06	10
Contents	Introduction to transactions (ACID Property and Implicit and Explicit Transaction) , Overview of concurrency control, Object based database and their Classification , Basic Concepts of Cloud based database with its advantages and Disadvantages.		
Method of Assessment	Assignment- Internal(Term Work)		
Learning Outcome 3	Compare Data mining, Data Warehousing and Distributed Database.	05	10
Contents	Explain Data mining & Data Warehousing with its advantages and Disadvantages , Comparison of Data mining & Data Warehousing, Architecture of Distributed Database and also its Classification with its advantages and Disadvantages		
Method of Assessment	Question Paper -External- End Sem Theory Exam		

RGPV (Diploma Wing) Bhopal	SCHEME FOR LEARNING OUTCOME	Branch Code	Course Code	CO Code	LO Code	Format No. 4
		C04	403			
COURSE NAME	DATABASE MANAGEMENT SYSTEM					
CO Description	Understand the Basic concepts and need of Database Management systems including Query Language and Data Model.					
LO Description	Identify the need of Database Management systems with the help of Architecture of DBMS.					

SCHEME OF STUDY

S. No.	Learning Content	Teaching -Learning Method	Description of T-L Process	Teach Hrs.	Pract. /Tut Hrs.	LRs Required	Remarks
1	DBMS Concepts, Database approach v/s Traditional file accessing approach, Advantages of database systems, Database system applications, Three level architecture: Mapping between views, DBMS users, Functions of DBA and designer, Schemas and instances, Data independence.	Traditional Lecture method + Handout+Videos	Teacher will explain the contents and provide handout to students. Teacher will conduct quiz to make students practice their knowledge	08	0	Handouts /Videos + ppt / Books / E-Contents	NIL

SCHEME OF ASSESSMENT

S. No.	Method of Assessment	Description of Assessment	Maximum Marks	Resources Required	External / Internal
1	End Sem Theory Exam	For the given content student will be asked Need of Database Management systems and their Architecture	10	Question/Test Paper /quiz questions	External

ADDITIONAL INSRUCTIONS FOR THE HOD/ FACULTY (IF ANY)

RGPV (Diploma Wing) Bhopal	SCHEME FOR LEARNING OUTCOME	Branch Code	Course Code	CO Code	LO Code	Format No. 4
		C04	403			
COURSE NAME	DATABASE MANAGEMENT SYSTEM					
CO Description	Understand the Basic concepts and need of Database Management systems including Query Language and Data Model.					
LO Description	Elaborate Overall Structure of Database and Query Language					

SCHEME OF STUDY

S. No.	Learning Content	Teaching -Learning Method	Description of T-L Process	Teach Hrs.	Pract. /Tut Hrs.	LRs Required	Remarks
1	Data Base Language: Data Definition Language, Data Manipulation Language and Data Control Language, Overall Database Structure.	Traditional Lecture method + Handout + Videos	Teacher will explain the contents and provide handout to students. Teacher will conduct quiz to make students practice their knowledge	6		Handouts /Videos + ppt / Books / E-Contents	NIL

SCHEME OF ASSESSMENT

S. No.	Method of Assessment	Description of Assessment	Maximum Marks	Resources Required	External / Internal
1	Internal Progressive Test	For the given content student will be asked Data Base Language and Database Structure.	10	Question/Test Paper /quiz questions	Internal

ADDITIONAL INSTRUCTIONS FOR THE HOD/ FACULTY (IF ANY)

RGPV (Diploma Wing) Bhopal	SCHEME FOR LEARNING OUTCOME	Branch Code	Course Code	CO Code	Format No. 4
		C04	403		

COURSE NAME	DATABASE MANAGEMENT SYSTEM
CO Description	Understand the Basic concepts and need of Database Management systems including Query Language and Data Model.
LO Description	Classify Data Model and give Example of Entity Relation Data Model.

SCHEME OF STUDY

S. No.	Learning Content	Teaching -Learning Method	Description of T-L Process	Teach Hrs.	Pract. /Tut Hrs.	LRs Required	Remarks
1	Introduction and Classification of Data Model, Comparison between the three types of models, ER data model: Entities and attributes, Entity types, Relationship among entities, representation of association & relationship, Defining the E-R diagram, Concept of Generalization, Aggregation and Specialization, keys.	Traditional Lecture method + Handout + Videos	Teacher will explain the contents and provide handout to students. Teacher will conduct quiz to make students practice their knowledge.	08	00	Handouts /Videos + ppt / Books / E-Contents	NIL

SCHEME OF ASSESSMENT

S. No.	Method of Assessment	Description of Assessment	Maximum Marks	Resources Required	External / Internal
1	End Sem Theory Exam	For the given content student will be asked about Data Model and features of ER Model	10	Question/Test Paper /quiz questions	External

ADDITIONAL INSTRUCTIONS FOR THE HOD/ FACULTY (IF ANY)

RGPV (Diploma Wing) Bhopal		SCHEME FOR LEARNING OUTCOME		Branch Code	Course Code	CO Code	LO Code	Format No. 4
				C04	403			
COURSE NAME	DATABASE MANAGEMENT SYSTEM							
CO Description	Understand the Basic concepts and need of Database Management systems including Query Language and Data Model.							
LO Description	Explain Relational Model and Codd's Relational database Rules.							
SCHEME OF STUDY								
S. No.	Learning Content	Teaching - Learning Method	Description of T-L Process	Teach Hrs.	Pract. /Tut Hrs.	LRs Required	Remarks	
1	Relational Model: Attributes and Domains, tuples, relations and their schemas, relation representation, relationship, integrity rules (Primary, Unique, Candidate, Check, Foreign key), Transforming ER diagram into the tables, Codd's Relational database rules.	Traditional Lecture method + Handout + Videos	Teacher will explain the contents and provide handout to students. Teacher will conduct quiz to make students practice their knowledge	08	00	Handouts /Videos + ppt / Books / E-Contents	NIL	
SCHEME OF ASSESSMENT								
S. No.	Method of Assessment	Description of Assessment	Maximum Marks	Resources Required		External / Internal		
1	End Sem Theory Exam	For the given content student will be asked about Relational Model , Integrity rules and Codd's Rules	10	Question/Test Paper /quiz questions		External		

ADDITIONAL INSTRUCTIONS FOR THE HOD/ FACULTY (IF ANY)

RGPV (Diploma Wing) Bhopal		SCHEME FOR LEARNING OUTCOME		Branch Code	Course Code	CO Code	LO Co	Format No. 4
				C04	403			
COURSE NAME	DATABASE MANAGEMENT SYSTEM							
CO Description	Design Data Base with the help of various Relational algebra Operations and Normal Forms.							
LO Description	Define various Relational algebra Operations.							
SCHEME OF STUDY								
S. No.	Learning Content	Teaching -Learning Method	Description of T-L Process	Teach Hrs.	Pract. /Tut Hrs.	LRs Required	Remarks	
1	Relational algebra and relational calculus, Relational algebra Basic operations like select, Project, Union ,set difference, Cartesian product, rename and additional operations like Set intersection, Natural Join, Division ,Join(Left, right and Full)	Traditional Lecture method + Handout + Videos	Teacher will explain the contents and provide handout to students. Teacher will conduct quiz to make students practice their knowledge.	08	00	Handouts /Videos + ppt / Books / E-Contents	NIL	
SCHEME OF ASSESSMENT								
S. No.	Method of Assessment	Description of Assessment	Maximum Marks	Resources Required		External / Internal		
1	End Sem Theory Exam	For the given content student will be asked about Relational algebra Operations and relational calculus.	10	Question/Test Paper /quiz questions		External		
ADDITIONAL INSTRUCTIONS FOR THE HOD/ FACULTY (IF ANY)								

RGPV (Diploma Wing) Bhopal	SCHEME FOR LEARNING OUTCOME	Branch Code	Course Code	CO Code	LO Code	Format No. 4
		C04	403			

COURSE NAME	DATABASE MANAGEMENT SYSTEM
CO Description	Design Data Base with the help of various Relational algebra Operations and Normal Forms.
LO Description	Compare Relational algebra and relational calculus Query Language

SCHEME OF STUDY

S. No.	Learning Content	Teaching - Learning Method	Description of T-L Process	Teach Hrs.	Pract. /Tut Hrs.	LRs Required	Remarks
1	Introduction and Comparison of relational calculus i.e. Tuple oriented and domain oriented relational calculus	Traditional Lecture method + Handout + Videos	Teacher will explain the contents and provide handout to students. Teacher will conduct quiz to make students practice their knowledge	8	00	Handouts /Videos + ppt / Books / E-Contents	NIL

SCHEME OF ASSESSMENT

S. No.	Method of Assessment	Description of Assessment	Maximum Marks	Resources Required	External / Internal
1	Internal Progressive Test	For the given content student will be asked Tuple oriented and domain oriented relational calculus.	10	Question/Test Paper /quiz questions	Internal

ADDITIONAL INSTRUCTIONS FOR THE HOD/ FACULTY (IF ANY)

RGPV (Diploma Wing) Bhopal	SCHEME FOR LEARNING OUTCOME	Branch Code	Course Code	CO Code	LO Code	Format No. 4
		C04	403			
COURSE NAME	DATABASE MANAGEMENT SYSTEM					
CO Description	Design Data Base with the help of various Relational algebra Operations and Normal Forms.					
LO Description	Identify Functional dependency and Referential integrity					

SCHEME OF STUDY

S. No.	Learning Content	Teaching - Learning Method	Description of T-L Process	Teach Hrs.	Pract. /Tut Hrs.	LRs Required	Remarks
1	Functional dependency: Definition, inference axioms for functional dependency, closure, cover and equivalence of FD, Referential integrity	Traditional Lecture method + Handout + Videos	Teacher will explain the contents and provide handout to students. Teacher will conduct quiz to make students practice their	08	00	Handouts /Videos + ppt / Books / E-Contents	NIL

SCHEME OF ASSESSMENT

S. No.	Method of Assessment	Description of Assessment	Maximum Marks	Resources Required	External / Internal
1	End Sem Theory Exam	For the given content student will be asked about Functional Dependency and it's rules	10	Question/Test Paper /quiz questions	External

ADDITIONAL INSTRUCTIONS FOR THE HOD/ FACULTY (IF ANY)

RGPV (Diploma Wing) Bhopal		SCHEME FOR LEARNING OUTCOME		Branch Code	Course Code	CO Code	Format No. 4
				C04	403		
COURSE NAME	DATABASE MANAGEMENT SYSTEM						
CO Description	Design Data Base with the help of various Relational algebra Operations and Normal Forms.						
LO Description	Build Data Base with the help of Normal Forms.						
SCHEME OF STUDY							
S. No.	Learning Content	Teaching - Learning Method	Description of T-L Process	Teach Hrs.	Pract. /Tut Hrs.	LRs Required	Remarks
1	Data Base Design : Concept of Normalization , Decomposition i.e Lossless or Lossy Decomposition, Normal forms, 1 NF, Data anomalies in 1 NF, Partial dependency, 2 NF, Data anomalies in 2 NF , Transitive Dependency, 3NF, Data anomalies in 3 NF, Boyce-Codd Normal Form.	Traditional Lecture method + Handout + Videos	Teacher will explain the contents and provide handout to students. Teacher will conduct quiz to make students practice their knowledge.	10	00	Handouts /Videos + ppt / Books / E-Contents	NIL
SCHEME OF ASSESSMENT							
S. No.	Method of Assessment	Description of Assessment	Maximum Marks	Resources Required	External / Internal		
1	End Sem Theory Exam	For the given content student will be asked to Design Data Base using Normal forms	10	Question/Test Paper /quiz questions	External		
ADDITIONAL INSTRUCTIONS FOR THE HOD/ FACULTY (IF ANY)							

RGPV (Diploma Wing) Bhopal	SCHEME FOR LEARNING OUTCOME	Branch Code	Course Code	CO Code	LO Code	Format No. 4
		C04	403			

COURSE NAME	DATABASE MANAGEMENT SYSTEM
CO Description	Develop Query Based Data Base Applications.
LO Description	Build Data Base and Tables with the help of DDL.

SCHEME OF STUDY

S. No.	Learning Content	Teaching -Learning Method	Description of T-L Process	Teach Hrs.	Pract. /Tut Hrs.	LRs Required	Remarks
1	Introduction to my SQL language, Structure of my SQL statements & my SQL writing guidelines, Data Definition commands: Creating a Database, Show, Creating a Table ,Use, Altering the Database, Altering the Table, RENAME, DESCRIBE, Dropping the Database, Dropping the Table, TRUNCATE.	Traditional Lecture method + Handout + Videos	Teacher will explain the contents and provide handout to students. Teacher will conduct quiz to make students practice their knowledge.	00	09	Handouts /Videos + ppt / Books / E-Contents	NIL

SCHEME OF ASSESSMENT

S. No.	Method of Assessment	Description of Assessment	Maximum Marks	Resources Required	External / Internal
1	External Practical	For the given content student will be asked to Create Table , Database and Dropping the Table , Database	10	Lab Manual /quiz question/Vi-Va	External

ADDITIONAL INSTRUCTIONS FOR THE HOD/ FACULTY (IF ANY)

RGPV (Diploma Wing) Bhopal		SCHEME FOR LEARNING OUTCOME		Branch Code	Course Code	CO Code	LO Code	Format No. 4
				C04	403			
COURSE NAME	DATABASE MANAGEMENT SYSTEM							
CO Description	Develop Query Based Data Base Applications.							
LO Description	Modify Data Base and Tables with the help of DML.							
SCHEME OF STUDY								
S. No.	Learning Content	Teaching - Learning Method	Description of T-L Process	Teach Hrs.	Pract. /Tut Hrs.	LRs Required	Remarks	
1	Data Manipulation Statements: SELECT statement that are described in (FROM, WHERE, GROUP BY, HAVING, ORDER BY),INSERT, UPDATE, DELETE, REPLACE.	Traditional Lecture method + Handout + Videos	Teacher will explain the contents and provide handout to students. Teacher will conduct quiz to make students practice their	00	09	Handouts /Videos + ppt / Books / E-Contents	NIL	
SCHEME OF ASSESSMENT								
S. No.	Method of Assessment	Description of Assessment	Maximum Marks	Resources Required		External / Internal		
1	External Practical	For the given content student will be asked to Manipulate Table , Database using DML Statements	10	Lab Manual /quiz question/Vi-Va		External		

ADDITIONAL INSTRUCTIONS FOR THE HOD/ FACULTY (IF ANY)

RGPV (Diploma Wing) Bhopal		SCHEME FOR LEARNING OUTCOME		Branch Code C04	Course Code 403	CO Code	LO Code	Format No. 4
COURSE NAME	DATABASE MANAGEMENT SYSTEM							
CO Description	Develop Query Based Data Base Applications.							
LO Description	Make use of Aggregate Functions and Various Constraints.							
SCHEME OF STUDY								
S. No.	Learning Content	Teaching - Learning Method	Description of T-L Process	Teach Hrs.	Pract. /Tut Hrs.	LRs Required	Remarks	
1	Aggregate Function (AVG, COUNT, MAX, MIN, SUM). Defining primary keys, foreign keys, Unique Keys, CHECK constraints in a table, removing constraints from table.	Traditional Lecture method + Handout + Videos	Teacher will explain the contents and provide handout to students. Teacher will conduct quiz to make students practice their knowledge.	00	09	Handouts /Videos + ppt / Books / E-Contents	NIL	
SCHEME OF ASSESSMENT								
S. No.	Method of Assessment	Description of Assessment	Maximum Marks	Resources Required		External / Internal		
1	External Practical	For the given content student will be asked to about use of Aggregate function and Constraint.	10	Lab Manual /quiz question/Vi-Va		External		
ADDITIONAL INSTRUCTIONS FOR THE HOD/ FACULTY (IF ANY)								

RGPV (Diploma Wing) Bhopal		SCHEME FOR LEARNING OUTCOME		Branch Code	Course Code	CO Code	LO Code	Format No. 4
				C04	403			
COURSE NAME	DATABASE MANAGEMENT SYSTEM							
CO Description	Develop Query Based Data Base Applications.							
LO Description	Conclude Various Joins Operations and View statements.							
SCHEME OF STUDY								
S. No.	Learning Content	Teaching -Learning Method	Description of T-L Process	Teach Hrs.	Pract. /Tut Hrs.	LRs Required	Remarks	
1	Joins (INNER, OUTER, SELF) and SELF Join, View (CREATE VIEW Statement, ALTER VIEW Statement, DROP VIEW Statement.	Traditional Lecture method + Handout + Videos	Teacher will explain the contents and provide handout to students. Teacher will conduct quiz to make students practice their knowledge.	00	09	Handouts /Videos + ppt / Books / E-Contents	NIL	
SCHEME OF ASSESSMENT								
S. No.	Method of Assessment	Description of Assessment	Maximum Marks	Resources Required	External / Internal			
1	Internal Practical- lab work	For the given content student will be asked to about use of Various Joins Operation and View Statement.	10	Lab Manual /quiz question/Vi-Va	Internal			
ADDITIONAL INSTRUCTIONS FOR THE HOD/ FACULTY (IF ANY)								

RGPV (Diploma Wing) Bhopal	SCHEME FOR LEARNING OUTCOME	Branch Code	Course Code	CO Code	LO Code	Format No. 4
		C04	403			

COURSE NAME	DATABASE MANAGEMENT SYSTEM
CO Description	Outline Advance Database Concepts.
LO Description	Explain Trigger and Database Connectivity to various languages.

SCHEME OF STUDY

S. No.	Learning Content	Teaching -Learning Method	Description of T-L Process	Teach Hrs.	Pract. /Tut Hrs.	LRs Required	Remarks
1	Overview of Trigger with example, Database Connectivity with Various Languages	Traditional Lecture method + Handout + Videos	Teacher will explain the contents and provide handout to students. Teacher will conduct quiz to make students practice their knowledge.	00	09	Handouts /Videos + ppt / Books / E-Contents	NIL

SCHEME OF ASSESSMENT

S. No.	Method of Assessment	Description of Assessment	Maximum Marks	Resources Required	External / Internal
1	Internal Practical- lab work	For the given content student will be asked to about Trigger and Connectivity of Database	10	Lab Manual /quiz question/Vi-Va	Internal

ADDITIONAL INSTRUCTIONS FOR THE HOD/ FACULTY (IF ANY)

RGPV (Diploma Wing) Bhopal		SCHEME FOR LEARNING OUTCOME		Branch Code	Course Code	CO Code	LO Code	Format No. 4
				C04	403			
COURSE NAME	DATABASE MANAGEMENT SYSTEM							
CO Description	Outline Advance Database Concepts.							
LO Description	Define Transaction, concurrency control, Object and Cloud based Database.							
SCHEME OF STUDY								
S. No.	Learning Content	Teaching -Learning Method	Description of T-L Process	Teach Hrs.	Pract. /Tut Hrs.	LRs Required	Remarks	
1	Introduction to transactions (ACID Property and Implicit and Explicit Transaction), Overview of concurrency control, Object based database and their Classification , Basic Concepts of Cloud based database with its advantages and Disadvantages.	Traditional Lecture method + Handout + Videos	Teacher will explain the contents and provide handout to students. Teacher will conduct quiz to make students practice their	06	00	Handouts /Videos + ppt / Books / E-Contents	NIL	
SCHEME OF ASSESSMENT								
S. No.	Method of Assessment	Description of Assessment	Maximum Marks		Resources Required	External / Internal		
1	Internal(Term Work)	For the given content student will be asked to about Transaction, Object and Cloud based database.	10		Assignment/quiz question/Vi-Va	Internal		
ADDITIONAL INSTRUCTIONS FOR THE HOD/ FACULTY (IF ANY)								

RGPV (Diploma Wing) Bhopal		SCHEME FOR LEARNING OUTCOME		Branch Code	Course Code	CO Code	LO Code	Format No. 4
				C04	403			
COURSE NAME	DATABASE MANAGEMENT SYSTEM							
CO Description	Outline Advance Database Concepts.							
LO Description	Compare Data mining, Data Warehousing and Distributes Database.							
SCHEME OF STUDY								
S. No.	Learning Content	Teaching -Learning Method	Description of T-L Process	Teach Hrs.	Pract. /Tut Hrs.	LRs Required	Remarks	
1	Explain Data mining & Data Warehousing with its advantages and Disadvantages , Comparison of Data mining & Data Warehousing, Architecture of Distributed Database and also it's Classification with its advantages and Disadvantages	Traditional Lecture method + Handout + Videos	Teacher will explain the contents and provide handout to students. Teacher will conduct quiz to make students practice their knowledge.	05	00	Handouts /Videos + ppt / Books / E-Contents	NIL	
SCHEME OF ASSESSMENT								
S. No.	Method of Assessment	Description of Assessment	Maximum Marks	Resources Required	External / Internal			
1	End Sem Theory Exam	For the given content student will be asked about Data mining , Data Warehousing and Architecture of Distributed Database.	10	Question/Test Paper /quiz questions	External			
ADDITIONAL INSTRUCTIONS FOR THE HOD/ FACULTY (IF ANY)								

DATABASE MANAGEMENT SYSTEM
COURSE OUTCOME(S) & LEARNING OUTCOME(S)

STUDENT WILL BE ABLE TO-

Course objective Details	
CO-1	Understand the Basic concepts and need of Database Management systems including Query Language and Data Model.
CO-2	Design Data Base with the help of various Relational algebra Operations and Normal Forms
CO-3	Develop Query Based Data Base Applications.
CO-4	Outline Advance Database Concepts.
Total	

CO-1	Understand the Basic concepts and need of Database Management systems including Query Language and Data Model.
LO-1	Identify the need of Database Management systems with the help of Architecture of DBMS.
LO-2	Elaborate Overall Structure of Database and Query Language.
LO-3	Classify Data Model and give Example of Entity Relation Data Model.
LO-4	Explain Relational Model and Codd's Relational database Rules.

CO-2	Design Data Base with the help of various Relational algebra Operations and Normal Forms.
LO-1	Define various Relational algebra Operations.
LO-2	Compare Relational algebra and relational calculus Query Language
LO-3	Identify Functional dependency and Referential integrity.
LO-4	Build Data Base with the help of Normal Forms.

CO-3	Develop Query Based Data Base Applications.
LO-1	Build Data Base and Tables with the help of DDL.
LO-2	Modify Data Base and Tables with the help of DML.
LO-3	Make use of Aggregate Functions and Various Constraints.
LO-4	Conclude Various Joins Operations and View statements.

CO-4	Outline Advance Database Concepts.
LO-1	Explain Trigger and Database Connectivity to various languages.
LO-2	Define Transaction, concurrency control, Object and Cloud based Database.
LO-3	Compare Data mining, Data Warehousing and Distributes Database.

Course outcome	Learning outcome	Assessment	Hours	Marks	Remark
CO1 (30 HRS) (40 MARKS)	LO1	External(th)	8	10	End Sem Theory Exam
	LO2	Internal (th)	06	10	Prog Test -I
	LO3	External(th)	8	10	End Sem Theory Exam
	LO4	External(th)	8	10	End Sem Theory Exam
CO2 (34 HRS) (40MARKS)	LO1	External(th)	08	10	End Sem Theory Exam
	LO2	Internal (th)	08	10	Prog Test -II
	LO3	External(th)	08	10	End Sem Theory Exam
	LO4	External(th)	10	10	End Sem Theory Exam
CO3 (36 HRS) (40 MARKS)	LO1	External (pr)	09	10	Practical exam
	LO2	External (pr)	09	10	Practical exam
	LO3	External (pr)	09	10	Practical exam
	LO4	Internal (pr)	09	10	Lab Work
CO4 (20 HRS) (30 MARKS)	LO1	Internal (pr)	09	10	Lab Work
	LO2	Internal(th)	06	10	Term Work
	LO3	External(th)	05	10	End Sem Theory Exam

	Progressive	Term Work (Internal)	Lab work(Internal)	Practical (External)	End Sem exam (External)	Total
CO1	10				30	40
CO2	10				30	40
CO3			10	30		40
CO4		10	10		10	30
Total	20	10	20	30	70	150