SCHEME OFCOURSEWORK

CourseDetails:

CourseTitle	**:DatabaseManagementSystems**		
CourseCode	**:15CT1108**	**L T P C**	**3 0 0 3**
Program:	**: B.Tech.**		
Specialization	**: InformationTechnology,ComputerScienceEngineering**		
Semester	**: VIII**		
Prerequisites	**:NIL**		
Coursestowhichitis a prerequisite	**: DataMining&DataWarehousing , DistributedDatabase**		

CourseOutcomes(COs):
At the end ofthe coursethestudent will be able to

1	Design EntityRelationship models.
2	Distinguishprocedural and non-procedural querylanguages.
3	Design database schemausingnormalization
4	Explain lock-based, time stampingandtree-basedprotocols.
5	IllustrateDatabase Recoverymethods.

CourseOutcomeVersus**ProgramOutcomes:**

COs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1
CO-1	2		2		3						3	3	3
CO-2	3		3		2						2		3
CO-3	3	3	2	3	2						2		3
CO-4	3		2		2						2		3
CO-5	3		2		2						2		3

S -Stronglycorrelated,*M-Moderately*correlated,*Blank-No correlation*

Assessment Methods:	Assignment/ Quiz /Seminar/ Case Study / Mid-Test / EndExam

Teaching-Learningand Evaluation

Week	Topic/ Contents	Course outcome	Sample Questions	Teaching Learning Strategy	Assesment Method
1	HistoryofDataBase Systemsand its Applications Data base systemvsFileSystemView of Data – DataAbstraction Instances andschemas, DataModels– the ER modelRelational model – othermodels	CO-1	Explain the advantagesofDBMSoverf ile systems Explain aboutE-R model	Teaching	Assignment Quiz
2	Database languages –DDL– DML Transactionmanagement– database systemstructure Storage manager – the queryprocessor	CO-2	Explain about the structureof DBMS Differentiatedatabasel anguages	Teaching	assignment
3	Database design and ERdiagrams Beyond ER design entitiesAttributes andentitysetsRelationshipsand RelationshipSets Additionalfeaturesof ERmodel Conceptualdesign with theERmodel Conceptualdesign forlargeenterprises.	CO-1	Explain abouttheconceptualdesig nofE-Rmodel	TeachingA nd DrawingE-R diagramsfr omscenario ’s	Quizand Mid
4	Introduction to the relationalmodel Integrityconstraintoverr elations Enforcingintegrityconstraints– querying relational dataLogical database design–introduction to views Destroying/alteringtablesandvie ws.	CO-1	Explain about the integrityconstraints . What is viewandexplainin detail	Teaching	Assignment
5	Relationalalgebra– selectionandprojectionset	CO-2	Explain about the typesofjoins	Teaching	Assignment Mid

	Renaming– joins – division– examples of algebra overviews				
6	Relational calculus – tuplerelationalcalculus Domainrelational calculus	CO-2	Explain about theTupleRelationalcalculus	Teaching	Mid
7	Schemarefinement– problemscaused byredundancyDecompositions – problemrelated to decompositionReasoning	CO-3	Explain about theimportance ofnormalization with suitableexample	Teaching	Mid
8	SECOND NormalformTHIRD Normal formsBCNF– lossless	CO-3	What is BCNFand explainin detail	Teaching	Mid
MIDEXAM-1					
9	Schemarefinementindatabasedesign Multi valueddependencies– FOURTH Normalform.	CO-3	Explain aboutmultivalueddependencies Explain about theimportance of	Teaching	Assignment
10	Transactionconcept-SimpleTransactionmodel-StorageStructure Transaction state-implementationof atomicityand durability Isolation,Concurrent – Executions	CO-4	What is Transaction.Explain aboutACIDproperties in detail withsuitableexamples	Teaching	Mid - 2Quiz
11	Serializability-recoverabilityImplementation ofIsolationTransactions as SQLstatements,ConcurrencyControl	CO-4	Explain aboutconcurrencycontrol Explain aboutlockbasedprotocols	Teaching	Mid -2Quiz Assignment
12	Dead lock Handling-Timestamp based protocolsvalidation- based protocols–	CO-4	What is dead lock andexplain about handlingofdead lock	Teaching	Mid-2Quiz
13	Multi versionschemes Insert, delete and predicateoperations Multiplegranularity	CO-4	Write about multiplegranularity	Teaching	Assignment
14	Recoveryand atomicity– log–based recovery Recovery with concurrenttransactions	CO-5	Explain aboutbuffermanagement? Explain aboutlog-	Teaching	Assignment Mid-2
15	Failurewithlossofnonvolatile	CO-5	Explain aboutdifferent raid	Teaching	Assignment

	storage-advance recovery systems Remote backupsystemsData on external storage–overview ofphysicalstoragemedia-		levels		
16	Fileorganizationandindexing – Data DictionaryStorageClusterindexes, primaryandsecondaryindexes Indexdatastructures – Hashbased indexing	CO-5	Explain aboutFileorganizationandindexing? Explain about hash basedindexing	Teaching	Mid-2Quiz
17	Tree baseindexing– B+ trees: a dynamic indexstructure.	CO-5	Explain aboutB+ trees?	Teaching	Assignment Mid-2
MIDEXAM-2					