SOPHIA GIRLS' COLLEGE(AUTONOMOUS), AJMER

Lesson Plan

Name : Kiran Bhagnani

Department: Computer Science

COURSE_PLAN_2016-17_MS_KIRAN_BHAGNANI

BCA Sem I 2016-17

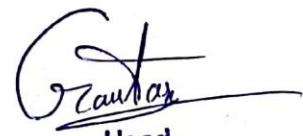### Subject: Multimedia Basics – I

Month		Areas covered	Other Activities
July		Introduction to Multimedia technology. Multimedia in : • Computer • Communications • Entertainment. • Various media elements of multimedia. • Advantages of multimedia • Disadvantages of multimedia System components of multimedia. What is User Interface . Types of user interface: • Novice/expert interface. • Graphical interface.	Class discussion
August		Multimedia platform . • Multimedia hardware components. • Multimedia software components. • Multimedia software components continued • commercial tools and standard What is HTML? Various tags in HTML: • Paired tags • Empty tags Head and body tags. How to create HTML document. Steps to open HTML document in browser.	Assignments and class test
September		Various types of style tags. Headers in HTML. What is list in HTML?	Oral test

		Types of List: • Ordered • Unordered • Definition Inserting Images in HTML documents. Various properties of <img> tag. Optimize image sizes. What are links? What are hyperlinks? Types of links: • Internal linking • External linking • Properties of <a> tag. Inserting tables in the HTML document	
October		Various attributes of <table> tag . Merging rows and columns in table using rowspan and colspan attribute. • Image Map • Creating Frames in the HTML document. Attributes of <frame> and <frameset > tags • Concept of Inline Frame. Creating style sheets to format the look and feel of the pages. • Cascading style sheets and its types • Form designing in HTML	Done practical Revision

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BCA Part – III 2016-17

Subject: Relational Database Systems

Month		Areas covered	Other Activities
July		Distributed database design, architecture of distributed processing system, data communication concept, data placement, placement of DDBMS and other components, concurrency Control and recovery.	Test
August		Ttransaction management, need of recovery, recovery techniques, Serialaizability, blocking, dead locks, introduction to query optimization Query optimization and processing.	Open Book Test
September		Algorithm for external sorting, select and join, object and set operations, heuristics in query optimization temporal database concept, multimedia database, data-mining, association rule, classification, application.	Test
October		Data warehousing, need, architecture, characteristics, data layer. Introduction to SQL, security and integrity of databases, security specifications in SQL. Oracle RDBMS: Overview of three tier client server – technology	Assignment
November		Modules of Oracle and SQL * Plus Data types, constraints, operators, DDL, DML, (create, modify, insert, delete and update) searching, matching and Oracle functions, data types, PL/SQL functions,	Practical Implementation
December		Error handling in PL/SQL, package functions, package functions, package procedures, Oracle transactions, SQL Stored Procedures.	Practical
January		Database Triggers: Introduction, Use and type of database triggers, triggers vs declarative integrity constraints, BEFORE Vs AFTER trigger combinations, creating a trigger, dropping a trigger	Revision

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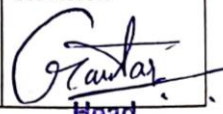Sophia Girls' College
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VCA Part – III (Sec A and B) 2016-17

Subject: Relational Database Management Systems(VCA)

Month		Areas covered	Other Activities
July		Entity relationship model, entities and entity sets their relationship, mapping constraints, generalization, aggregation, use of ER model for the design of databases.	Test
August		Normalization up to BCNF.Implementation trade offs of sequential, random, index sequential file Organisation, introduction and history of relational database, system relational algebra.	Test
September		Introduction to SQL, Oracle RDBMS: Overview of three tier client server – technology Modules of Oracle & SQL*PLUS Data types, Constraints, Operators, DDL, DML (Create, Modify, Insert, Delete and Update); Searching,	Practical
October		Matching and Oracle Functions, Data types, PL/SQL functions .Error handling in PL/SQL, package functions, package procedures.	assignment
November		Oracle transactions. SQL Stored Procedures .Database Triggers: Introduction, Use & type of database Triggers, Triggers Vs. Declarative Integrity Constraints	Practical and test
December		BEFORE Vs. AFTER Trigger Combinations, Creating a Trigger, Dropping a Trigger.	Oral Test
January		Security and integrity of databases, security specifications in SQL.	Revision

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M.Sc C.Sc. Sem III 2016-17

SUBJECT: Advanced Database Management Systems

Month		Areas covered	Other Activities
July		Distributed database design, architecture of distributed processing system, data communication concept, data placement, placement of DDBMS and other components, concurrency. Control and recovery, transaction management, need of recovery, recovery techniques, Serialaizability, blocking, dead locks. temporal database concept, multimedia database, .Introduction to query optimization. Query optimization and processing, algorithm for external sorting, select and join, object and set operations, heuristics in query optimization.	Test
August		Object Oriented modeling, class, different types of attributes, generalization, inheritance, aggregation, encapsulation, complex objects, object definition language, object query language, object technology in RDBMS, primary, secondary, multi-level files, dynamic multi-level index using B & B+ tree.	Assignment
September		Introduction to SQL, security and integrity of databases, security specifications in SQL. Oracle RDBMS: Overview of three tier client server – technology. modules of Oracle and SQL * Plus Data types, constraints, operators, DDL, DML, (create, modify, insert, delete and update) searching, matching and Oracle functions, data types, PL/SQL functions, Error handling in PL/SQL, package functions, package functions, package procedures, Oracle transactions, SQL Stored Procedures. & functions, creation and execution of procedures.	Internal Exams
October		Database Triggers: Introduction, Use & type of database Triggers, Triggers Vs. Declarative Integrity Constraints, BEFORE Vs. AFTER Trigger Combinations, Creating a Trigger, Dropping a Trigger.	Practical and revision

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BCA Sem II 2016-17
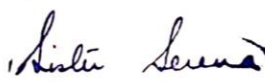
Subject: Multimedia Basics – II

Month		Areas covered	Other Activities
December		Images: Raster and Vector image, applications of image, image capture	--
January		Image compression: Lossy and Lossless Compression, advantages and disadvantages of image compression, audio compression and decompression, audio synthesis, speech recognition and Speech Synthesis. Digital video Interface, jpeg image compression. MIDI, video capturing, compression, , time-based media representation and delivery .	Group discussion
February		Mpeg video compression, Developing Applications using multimedia, methodology and design, Various multimedia laws: Patent law, Trademark Law, Trade secret Law, Copyright Law. Application of Multimedia: Intelligent Multimedia system, training and education, kiosks, multimedia in office and home. Introduction to Flash:	Class test
March		Tools of Flash (Pen, Pencil, Paint Bucket Tool, Eye Dropper, Text, 3D rotation etc), Drawing object in flash (line, curve, oval, Rectangle , Polystar tool) , Layers and its types in flash. Keyframes. Object based animation, motion tween , classic tween and shape tween.	Practicals Revision

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BCA Sem IV 2016-17

Subject: DBMS- II

Month		Areas covered	Other Activities
December		Transaction management: Concept, ACID Properties Schedules : Serial and non serial schedules,	--
January		Serializability, concurrency. Deadlock : handling , detection and prevention. Recovery techniques: log based recovery. What is RDBMS and its related terms, Dr. E.F.Codd's Rule for RDBMS. Introduction to SQL Components of SQL	Group discussion
February		SQL * Plus Data types. Constraints: • Primary key • Foreign key • Check • Unique • Not null DDL, DML commands: Create ,Alter, Drop ,Delete, Truncate, Insert, Update , Describe , Select, Searching and Matching • Like operators, Between , Not between, In operator , Alias , And /or	Class test
March		Oracle functions: • String • Mathematical • Date and time Group by clause , Group By having clause, Joins and its type, Sub Queries	Practicals Revision

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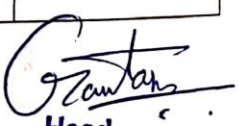
Subject: Artificial Intelligence

Month		Areas covered	Other Activities
December		Definition of AI, Application of AI, knowledge-based systems, representation of knowledge organization and acquisition of knowledge.	Test
January		Syntax, semantics of propsitional logic, syntax and semantics of FOPL, conversion to clausal form, inference rule, resolution principles, non-deductive inference methods, representation using rules, truth maintenance system, predicate completion and circumscription, modal and temporal logics, fuzzy logic.	Assignments
February		Bayesian probabilistic inference, possible word representation, Dempster-Shafer Theory, Ad-Hoc methods, associative networks, frame networks, search problems, uniformed or blind search, searching and-or graph.	Assignment
March		Concept of learning: Inductive and deductive, Knowledge acquisition, rote learning, Components of Learning Model, Performance Measures, Types of Learning (Supervised, Unsupervised, Active & Reinforcement). Concept of expert system, need for an expert system, Characteristics & features of an expert system. Components of an expert system, Stages in the development of an expert system, Application areas of Expert System.	Internal Exams

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