



KONGU ARTS AND SCIENCE COLLEGE

(An Autonomous Institution, Affiliated to Bharathiar University, Coimbatore)

ERODE – 638 107

PROGRAM NAME

B.C.A.



KONGU ARTS AND SCIENCE COLLEGE

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2019-2020



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SYLLABUS

SEM	Course Code	Core 10: RDBMS	Total Marks: 100		Hours per Week	Credits
V	17UAJCT502		CIA: 25	ESE: 75	5	4

Objectives: To enable the students to understand the fundamentals of database systems, Relational model, transaction processing and query processing, fundamentals of PL/SQL.

Course Outcome: On Completion of this course the students will be able to

- CO1 Understand the basic concepts of DBMS and RDBMS.
- CO2 Create the DDL statements for ORACLE.
- CO3 Create the DML statements for ORACLE.
- CO4 Apply the SQL statements for Database Management.
- CO5 Create PL/SQL query for the database access.

UNIT – I: Database Concepts: An Introduction - Relationships - DBMS - RDBMS - Integrity Rules – Relational Algebra. Database Design: - Data Modeling – Dependency – Database Design – Normal Forms – Dependency Diagrams - Denormalization.

UNIT – II: Oracle Tables: DDL: Naming Rules and conventions – Data Types – Constraints – Creating Oracle Table – Altering an Existing Table – Dropping, Renaming, Truncating Table – Table Types – Spooling.

UNIT – III: Working with Table: DML – Adding a new Row/Record – Customized Prompts – Updating and Deleting an Existing Rows/Records – Retrieving Data from Table – Arithmetic Operations – Restricting Data with WHERE clause – Sorting – DEFINE command – CASE structure. Multiple Tables: Join – Set operations.

UNIT – IV: PL/SQL: A Programming Language: History – Fundamentals – Block Structure – Comments – Data Types – Other Data Types – Declaration – Assignment operation – Bind variables – Substitution Variables – Printing – Arithmetic Operators. Control Structures and Embedded SQL: Control Structures – Nested Blocks – SQL in PL/SQL – Data Manipulation – Transaction Control statements.

UNIT – V: PL/SQL Cursors and Exceptions: Cursors – Implicit & Explicit Cursors and Attributes – Cursor FOR loops – SELECT...FOR UPDATE – WHERE CURRENT OF clause – Exceptions – Types of Exceptions. Named Blocks: Procedures – Functions – Packages – Triggers.



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TEXT BOOK:

Nilesh Shah, "DATABASE SYSTEMS USING ORACLE", 2nd edition, PHI, 2011.

REFERENCE BOOKS:

1. "Database Management Systems", Arun Majumdar & Pritimoy Bhattacharya, 2007, TMH.
2. "Database Management Systems", Gerald V. Post, 3rd edition, 2009, TMH.
3. "SQL, PL/SQL The Programming language of Oracle", Ivan Bayross, III Revised Edition, BPB Publications, 2010.

QUESTION PAPER PATTERN		
SECTION - A	SECTION - B	SECTION - C
10 x 1 = 10 Marks (Multiple Choice, Four options) Two questions from each unit	5 x 7 = 35 Marks (Either or choice) Two questions from each unit	3 x 10 = 30 Marks (Answer any three Questions) One Question from each unit

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SEM	Course Code	Core Lab 5: XAMP Lab	Total Marks: 100		Hours per Week	Credits
V	17UAJCP503		CIA: 40	ESE: 60	6	4

1. Write a Program to read data from webpage using forms and various data controls to implement client side validation using JavaScript.
2. Write a program to implement String, Array, Math and Date Functions.
3. Write a Program by implementing PHP server side validation.
4. Write a Program to implement the concept of cookies.
5. Write a Program to implement the concept of sessions.
6. Write a Program to implement File uploads in PHP.
7. Write a Program to implement Database connectivity in PHP with MYSQL and create a table named as employee.
8. INSERT employee details to employee table and display the result in web page.
9. UPDATE all the records of employee in employee table and delete the data.
10. Search the employee table based on the given criteria.

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SEM	Course Code	Core Lab 6: ORACLE Lab	Total Marks: 100		Hours per Week	Credits
			CIA: 40	ESE: 60		
V	17UAJCP504				5	3

1. Create the following tables:

Employee: Employee number number (6) as a Primary Key, employee name varchar2 (10), department ID number (3) as a Foreign key.

Department: Department ID number (3) as a primary key, department name varchar2 (10).

2. Alter employee name as varchar2 (20) and add the salary column. Insert rows into the employee table.
3. Perform update and delete operations in employee table.
4. Display the employees belongs to a specific department. Sort the department table.
5. Select the minimum and maximum salary from employee table. Also find the average salary from the employee table.
6. Display the employee details with department name using join.
7. Write a PL/SQL block using selection statement.
8. Write a PL/SQL block using looping statement.
9. Write a PL/SQL block to implement the concept of exception handling.
10. Write a before trigger for insert query of an employee table.

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SEM	Course Code	Skill Based Subject – III: PHP & MySQL	Total Marks: 75		Hours per Week	Credits
			CIA: 20	ESE: 55		
V	17UAJST508				4	3

Objectives: To enable the students to understand the fundamentals of PHP and to develop their skill set in the web applications.

Course Outcome: On Completion of this course the students will be able to

CO1 Understand the fundamentals of PHP.

CO2 Understand the concepts of functions and arrays in PHP.

CO3 Know the client and server side validation.

CO4 Know the cookies.

CO5 Understand the concepts of databases.

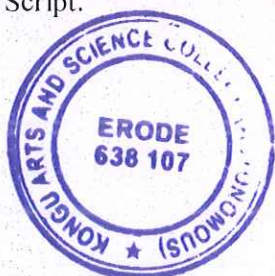
UNIT – I: PHP Basics: Introduction – Getting PHP – Development Environment – Creating and Running a PHP Page – Mixing HTML and PHP – Printing Some Text – Printing Some HTML – More Echo Power – Comments in PHP – Variables – Creating Variable Variables – Constants – Strings – PHP Data Types – String Operators - Execution Operators – Identical Operator - foreach loops.

Self Study: Operators: Assignment, Comparison, Logical, Bitwise, Increment and Decrement Operators, Math Operators. **Flow Control:** if, else, elseif, switch – for, while, do...while, break and continue.

UNIT – II: Strings and Arrays: Converting to and from Strings – Creating, Storing, Modifying and Deleting Arrays – Handling Arrays with Loop. **PHP Functions:** Creating Functions - Nesting Functions – Passing Arguments and Arrays to Functions – Returning Data and Arrays from Functions - Creating Include Files. **Object Oriented Programming:** Creating Classes – Creating Objects – Setting Access to Properties and Methods.

Self Study: PHP String Functions and Array Functions.

UNIT – III: Reading Data in Web Pages: Set Up web Page to Communicate with PHP – Handling Text Box, Text Areas, List Box, Check Box and Radio Button – Handling Password and Hidden Controls – Handling File Uploads – Handling Buttons. **Browser Handling:** Server Variables – HTTP Headers – Performing Server Side Data Validation – Performing Client Side Data Validation using Java Script.



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Self Study:

1. Java Script Variables, Functions, Forms and Event Handling.
2. Create a Simple User Registration web Page and Validate with Java Script and PHP.

UNIT – IV: Cookies – Sessions – FTP – Sending Email – Sending Advanced Email – Adding Attachments to Email.

Self Study:

1. The usages of Session in PHP web Page.
2. Sending Email Using PHP.

UNIT – V: Working with Database: What is a Database? – Creating a MySQL Database – Creating a New Tables – Inserting New Data Items into a Database – Accessing the Database in PHP – Updating Database – Deleting Records – Sorting data in Database.

Self Study: WAMP – XAMPP – LAMP

TEXT BOOKS:

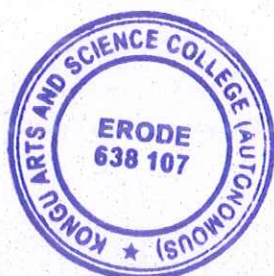
1. Steven Holzner, “PHP: The Complete Reference”, McGraw Hill Education Edition 2008.
2. Jim Keogh, “Java Script DeMYSTiFieD – A Self teaching Guide”, Tata McGraw-Hill Edition 2005.

REFERENCE BOOK:

“PHP6 and MySQL Bible”, Tim Converse, Joyce Park and Suehring Steve, Willy Publishing, Inc., 2010.

QUESTION PAPER PATTERN		
SECTION - A	SECTION - B	SECTION - C
10 x 1 = 10 Marks (Multiple Choice, Four options) Two questions from each unit	5 x 3 = 15 Marks (Either or choice) Two questions from each unit	3 x 10 = 30 Marks (Answer any three Questions) One Question from each unit

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SEM	Course Code	Elective I: Software Testing	Total Marks: 100		Hours per Week	Credits
V	17UAJET505			CIA: 25	ESE: 75	5

Objectives: To enable the students to understand the fundamentals and need for software testing and various levels of Software testing.

Course Outcome: On Completion of this course the students will be able to

- CO1 Understand the basic concepts Testing
- CO2 Understand the types of Testing Concept.
- CO3 Know the need of testing.
- CO4 Validate the software by Testing.
- CO5 Select the Manual or Automation Tools for software testing.

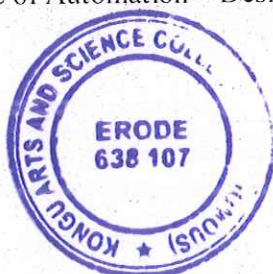
UNIT-I: Software Development Life Cycle models: Phases of Software project – Quality, Quality Assurance, Quality control – Testing, Verification and Validation **White-Box Testing:** Static Testing – Structural Testing – Challenges in White-Box Testing.

UNIT-II: Black-Box Testing: What is Black-Box Testing? - Why Black-Box Testing? – When to do Black-Box Testing? – How to do Black-Box Testing? **Integration Testing:** Integration Testing as Type of Testing – Integration Testing as a Phase of Testing – Scenario Testing – Defect Bash.

UNIT-III: System and Acceptance Testing: system Testing Overview – Why System testing is done? – Functional versus Non-functional Testing - Functional testing - Non-functional Testing – Acceptance Testing – Summary of Testing Phases.

UNIT-IV: Performance Testing: Factors governing Performance Testing – Methodology of Performance Testing – tools for Performance Testing – Process for Performance Testing – Challenges. **Regression Testing:** What is Regression Testing? – Types of Regression Testing – When to do Regression Testing – How to do Regression Testing – Best Practices in Regression Testing.

UNIT-V: Test Planning, Management, Execution and Reporting: Test Planning – Test Management – Test Process – Test Reporting. **Software Test Automation** – What is Test Automation? – Terms used in Automation – Skills Needed for Automation – What to Automate, Scope of Automation – Design and Architecture for Automation – Genetic Requirement for test



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Tool/Framework – Process model for Automation – Selecting a Test Tool – Automation for Extreme Programming Model – Challenges in Automation.

TEXTBOOK:

Srinivasan Desikan & Gopalswamy Ramesh, "Software Testing - Principles and Practices", Pearson Education, 2006.

(UNIT-I: 2.1-2.3, 3.1-3.4 UNIT-II: 4.1-4.4, 5.1-5.5 UNIT III: 6.1-6.7

(UNIT IV: 7.1-7.6, 8.1-8.5 UNIT-V: 15.1-15.5, 16.1-16.10)

REFERENCE BOOKS:

1. "Effective Methods of Software Testing", William E.Perry, 3rd ed, Wiley India.

2. "Software Testing", Renu Rajani, Pradeep Oak, 2007, TMH.

QUESTION PAPER PATTERN		
SECTION - A	SECTION - B	SECTION - C
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SEM	Course Code	Elective I: Android and Its applications	Total Marks: 100		Hours per Week	Credits
			CIA: 25	ESE: 75		
V	17UAJET506				5	4

Objectives: To set up environment and create application, design and UI based application, to acquire knowledge in resources and services, access database and to develop a hybrid application for android.

Course Outcome: On Completion of this course the students will be able to

- CO1 Understand the basic concepts of Android and its architecture.
- CO2 Understand the flow work of UI notification.
- CO3 Know about data persistence.
- CO4 Know the Network and JSON Services.
- CO5 Understand the basics of Intents.

UNIT – I: Introduction: What is Android – Architecture of Android – Android SDK –Android Development Tools- Eclipse – Creating Android Virtual Device – Anatomy of an Android Application.

UNIT – II: Android User Interface: Understanding the concept of screen – Adapting to display orientation – Managing changes to screen orientation – Utilizing the action Bar –Creating the user interface programmatically – listening for UI notification. Designing User interface – Designing user interface with Views.

UNIT – III: Data Persistence: Persisting data to files –Creating and using Databases. Content providers: Sharing data in android –Using a content provider. Messaging – SMS Messaging –sending E-Mail.

UNIT – IV: Networking: Consuming Web Services using HTTP – Consuming JSON Services Publishing Android Applications: Preparing for Publishing – Deploying APK File.

UNIT – V: Using Intents and the Phone Details: Intents - Placing a call from your Activity – Modifying the Android phone dialer. Application: Creating a SQLite Database – Creating a custom content provider –Creating and Running the find friend Activity.



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TEXT BOOKS:

1. Jerome (J.F.). "Android™ A Programmer's Guide", 3rd Edition, Tata McGraw Hill Edition 2010. (Unit I to Unit IV)
2. Wei-Meg. Lee," Beginning Android™ Application Development ", First Edition, Rewa Printers, Delhi, 2015.(Unit V)

REFERENCE BOOK:

Marko Gargenta & Masumi Nakamura "Learning Android ", Second Edition, Shroff Publishers and Distributors Pvt.Ltd, 2014.

QUESTION PAPER PATTERN		
SECTION - A	SECTION - B	SECTION - C
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SEM	Course Code	Elective I: Data Mining	Total Marks: 100		Hours per Week	Credits
			CIA: 25	ESE: 75		
V	17UAJET507				5	4

Objectives: To enable the students to be familiar with the concepts of data mining and data warehouse used for Knowledge Discovery in Databases.

Course Outcome: On Completion of this course the students will be able to

- CO1 Understand the basic concepts of data mining.
- CO2 Understand about the preprocessing techniques.
- CO3 Know about the classification in data mining
- CO4 Learn about classification algorithms and prediction
- CO5 Know about the cluster analysis

UNIT – I: Introduction: What is Data Mining? – Kind of data: Relational database – Data warehouse – Transactional database – Data Mining Functionalities – Classification of data mining systems – Data mining task primitives – Integration data mining system – Major Issues.

UNIT – II: Data Preprocessing: Why preprocess the data? – Data cleaning: Missing values – Noisy Data – Data Cleaning as a process – Data reduction – what is data warehouse? – OLAP operations – Data warehouse architecture.

UNIT – III: Classification and Prediction: Classification – Decision Tree induction – Attribute Selection Measures - Tree pruning – Scalability and Decision tree induction – Bayesian Classification – Bayes' Theorem – Naïve Bayesian Classification.

UNIT – IV: Lazy Learners- K-Nearest Neighbor Classifiers- Case based Reasoning- Genetic Algorithm- Rough set approach- Fuzzy set approaches - Prediction: Linear regression - Non-linear regression - Accuracy and Error measures.

UNIT – V: What is cluster Analysis? – Categorization of Major clustering methods – Classical Partitioning Methods: K-Means and K-Medoids – Hierarchical Methods – Agglomerative and Divisive Hierarchical Clustering – BIRCH – ROCK.




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TEXT BOOK:

Jiawei Han and Micheline Kamber. "Data Mining Concepts and Techniques", Morgan Kaufmann Publishers, Second Edition, 2008.

REFERENCE BOOKS:

1. "Data Mining", Richard J. Roiger, Michael W. Geatz, Pearson Education, First Edition, 2007.
2. "Data Mining", Pieter Adriaans, Dolf Zantinge, Pearson Education, First Edition, 2007.

QUESTION PAPER PATTERN		
SECTION - A	SECTION - B	SECTION - C
<p>10 x 1 = 10 Marks (Multiple Choice, Four options) Two questions from each unit</p>	<p>5 x 7 = 35 Marks (Either or choice) Two questions from each unit</p>	<p>3 x 10 = 30 Marks (Answer any three Questions) One Question from each unit</p>

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SEM	Course Code	Elective II : E - Commerce	Total Marks: 100		Hours per Week	Credits
			CIA: 25	ESE: 75		
VI	17UAJET603				5	4

Objectives: To inculcate knowledge on E-Commerce concepts in the present IT world.

Course Outcome: On Completion of this course the students will be able to

- CO1 Understand the basic concepts of E-Commerce and its architecture.
- CO2 Understand the mobile commerce concepts and network security.
- CO3 Know the firewall and encryption techniques.
- CO4 Know the Electronic Payment systems of E-Commerce.
- CO5 Apply EDI in E-commerce.

Unit – I: Introduction: Definition of E-Commerce – Evolution of E-Commerce – E-Commerce Technologies – E – Commerce From Different Perspective – E-Commerce Applications- Incentives for Engaging In E – Commerce – Needs of E – Commerce – Drivers of E-Commerce – Advantages and Disadvantages of E – Commerce – E – Commerce Frame Work.

E-Commerce: Architecture to Models: Architecture of E-Commerce - E-Commerce Models - Inter organizational E-Commerce Intra organizational E-Commerce - Impacts of E-Commerce on Business - Impacts of E-Commerce on organizations - Success Factors of E-Commerce.

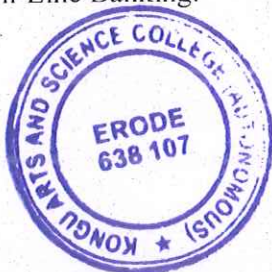
Unit – II: Mobile Commerce: What is M-Commerce? – Feature of M-Commerce – Industries Affected by M-Commerce – History And Applications of M-Commerce – WAP – WAP Architecture – Advantages of WAP – Mobile Computing Devices.

E-Commerce: Web And Network Security: Overview of a Web – Security Issues on Web – Categories of Security Threads / Attacks – Security Concerns – Threads to Servers – Some More Security Threads – Network Security.

Unit – III: Firewalls: Introduction – Working of Firewall- Importance of Firewall for E-Commerce Systems - Types of Firewall- Components of Firewall - Factors to Consider in Firewall Design.

Encryption Techniques: Introduction to Cryptography – Encryption – Basic Vocabulary of Classical Encryption – Encryption Techniques – Benefits and Limitations of Encryption.

Unit – IV: Electronic Payment System : Introduction – Need for EPS – Conventional Vs Electronic Payment System – Process of EPS – Electronic Payment Protection Protocols – Payment Gateways – Certificates – Digital Tokens – Types of EPS – Critical Success Factors of E-Commerce Payment System - Risks And Security – Disadvantage of Electronic Currency Payment System - On-Line Banking.



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Unit – V: Electronic Data Interchange (EDI): Introduction – Definition – Benefits – EDI Example. EDI: the Nuts and Bolts: EDI Technology – EDI Standards – EDI Communications – EDI Implementation.

TEXT BOOKS:

1. S.K.Mourya, Shalu Gupta, "E-Commerce", Narosa Publishing House, First Edition, 2015.
(UNIT I: Chapter 1: 1.1 to 1.10, Chapter 2: 2.1 to 2.6
UNIT II: Chapter 4 and Chapter 5
UNIT III: Chapter 6: 6.1 to 6.6 and Chapter 7: 7.1, 7.2, 7.3, 7.4, 7.9
UNIT IV: Chapter 9)
2. David Whiteley, "e-commerce Strategy, Technologies and Applications", Tata Mc-Graw Hill, 2006. (UNIT V: Chapter 8: 8.1, 8.2, 8.3, 8.4, Chapter 9: 9.1, 9.2, 9.3, 9.4)

REFERENCE BOOKS:

1. "E-Commerce", Dr.K.Abirami Devi, Dr. m.Alagammai, Margham Publications , 2012.
2. "Introduction to E-commerce", Nidhi Dhawan, International Book House P.Ltd, First Edition, 2010.
3. "Electronic Commerce Framework, Technologies & Applications", Bharat Bhasker, Tata Mc-Graw Hill, Second Edition.

QUESTION PAPER PATTERN		
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SEM	Course Code	Elective II: Mobile Computing	Total Marks: 100		Hours per Week	Credits
			CIA: 25	ESE: 75		
VI	17UAJET605				5	4

Objectives: To inculcate knowledge on Mobile communication and Wireless sensor concepts in the present IT world.

Course Outcome: On Completion of this course the students will be able to

- CO1 Understand the basic concepts of mobile computing and its architecture.
- CO2 Understand the Wireless transmission mechanisms.
- CO3 Know the Medium Access Control techniques.
- CO4 Know the Telecommunications systems and Mobile Network Layer.
- CO5 Understand the basics of MANET and WSN.

UNIT – I: Introduction: Mobile Computing – Mobile Computing Architecture – Mobile Devices – Mobile System Networks – Data Dissemination – Mobility Management – Security.

UNIT – II: Wireless Transmission: Frequencies for radio transmission: Regulations – Signals – Antennas – Multiplexing: Space division multiplexing – Frequency division multiplexing – Time division multiplexing – Code division multiplexing – Spread Spectrum: Direct sequence spread spectrum – Frequency hopping spread spectrum.

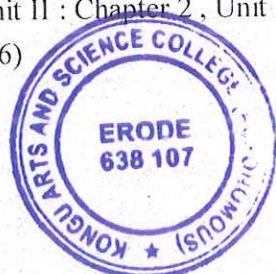
UNIT – III: Medium Access Control: Motivation for a specialized MAC: Hidden and exposed terminals – Near and far terminals – SDMA – FDMA – TDMA : Fixed TDM – Classical Alhoa – Slotted Alhoa – CSMA – Multiple Access with collision Avoidance – Polling – CDMA – Comparison of S/T/F/CDMA.

UNIT – IV: Telecommunications Systems: GSM: Mobile Services – System Architecture – Protocols – Localization and Calling – Security - DECT – TETRA.
Mobile Network Layer: Mobile IP – DHCP – WAP: Architecture – WAP 2.0.

UNIT – V: Mobile Ad-Hoc and Sensor Networks: Introduction to Mobile Ad-hoc Network – MANET – WSN – Applications.

TEXT BOOKS:

1. Raj Kamal, “Mobile Computing”, Oxford University Press 2007, New Delhi.
(Unit I : Chapter I and Unit V : Chapter 11)
2. Jochen H.Schiler , “Mobile Communications”, Second Edition, Pearson Education, New Delhi 2007.
(Unit II : Chapter 2 , Unit III : Chapter 3 , Unit IV : Chapter 4.1 to 4.3 , 8.1 to 8.2 , 10.3.1 and 10.6)



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REFERENCE BOOKS:

1. "Mobile Communications", Jochen H. Schiller, , Dharma Prakash*Agarval, Qing and An Zeng,
2. "Introduction to Wireless and Mobile systems", Thomson Asia Pvt Ltd. 2005.

QUESTION PAPER PATTERN		
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SEM	Course Code	Elective III: Client / Server Computing	Total Marks: 100		Hours per Week	Credits
			CIA: 25	ESE: 75		
VI	17UAJET607				5	4

Objective: To enable the students to inculcate knowledge on basic Client / Server concepts

Course Outcome: On Completion of this course the students will be able to

- CO1 Know the basics of Client/Server, applications and its architecture.
- CO2 Understand the various Operating Systems for Client / Server Computing.
- CO3 Know the procedure calls and Rules.
- CO4 Know the TP monitors and its uses.
- CO5 Understand the distributed objects and services.

UNIT – I: Introduction: The Client/Server Computing Era - What is Client / Server? – Types of Servers: File Server – Database Server – Transaction Server – Groupware Server – Object Server – Web Server – What is Middleware? – Fat Server – Fat Client – 2-Tier Vs. 3-Tier. Client / Server Building Blocks.

UNIT – II: Clients, Servers and Operating Systems: Anatomy of a Server Program – What Does a Server Need From an OS? - Server Scalability – Client Anatomy - What Does a Client Need From an OS? - Client / Server Hybrids. Client OS Trends - Client OS – Server OS Trends – Server OS.

UNIT – III: RPC, Messaging, and Peer to Peer: Remote Procedure Call – Messaging and Queuing – MOM Vs. RPC.

Stored Procedures, Triggers and Rules: Stored Procedures - Stored Procedures Vs. Static and Dynamic SQL - Triggers and Rules.

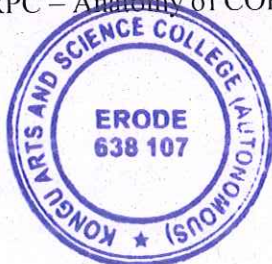
UNIT – IV: The Magic Of Transactions: The ACID Properties – Transaction Models.

TP Monitors: What is a TP Monitor? TP Monitors and OS – Funneling Act Performance - TP Monitors and Transaction Management - TP Monitors Client/Server Interaction Types – Transactional RPCs, Queues and Conversations.

TP-Lite or TP-Heavy: Origins of TP-Lite – TP-Lite Vs. TP-Heavy.

UNIT – V: Distributed Objects And Components: What is Distributed Object? – From Distributed Objects to Components – 3 Tier Client / Server Objects Style.

CORBA: What is CORBA Distributed Object? – OMG's Object Management Architecture – ORB – ORB Vs. RPC – Anatomy of CORBA 2.0 ORB – CORBA Object Services.



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TEXT BOOK:

Robert Orfali, Dan Harkey, Jeri Edwards "The Essential Client/Server Survival Guide", Second Edition, 2001.

REFERENCE BOOKS:

1. "Client / Server Computing" – Patrick Smith, Steve Guenferich , 2nd edition, PHI, 2003.
2. "Client/ Server Computing" — Dewire and Dawana Travis ,TMH, First Edition, 2008.
3. "Client/ Server" Unleashed- Techmedia, First Edition, 1998.

QUESTION PAPER PATTERN		
SECTION - A	SECTION - B	SECTION - C
10 x 1 = 10 Marks (Multiple Choice, Four options) Two questions from each unit	5 x 7 = 35 Marks (Either or choice) Two questions from each unit	3 x 10 = 30 Marks (Answer any three Questions) One Question from each unit

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SEM	Course Code	Elective III: Artificial Intelligence and Expert Systems	Total Marks: 100		Hours per Week	Credits
			CIA: 25	ESE: 75		
VI	17UAJET608				5	4

Objective: To enable the students to acquire knowledge in Artificial Intelligence and Expert System.

Course Outcome: On Completion of this course the students will be able to

- CO1 Know the basics of AI Techniques.
- CO2 Understand Various algorithms in AI.
- CO3 Know the Knowledge Representation and its issues.
- CO4 Understand the Predicate Logics.
- CO5 Apply rules in Knowledge representation.

UNIT – I: Introduction: AI Problems – AI techniques – Criteria for success. Problems, Problem Spaces, Search: State space search – Production Systems – Problem Characteristics – Issues in design of Search.


UNIT – II: Heuristic Search techniques: Generate and Test – Hill Climbing – Best-First, Problem Reduction, Constraint Satisfaction, Means-end analysis.

UNIT – III: Knowledge representation issues: Representations and mappings – Approaches to Knowledge representations – Issues in Knowledge representations – Frame Problem.

UNIT – IV: Using Predicate Logic: Representing simple facts in logic – Representing Instance and Isa relationships – Computable functions and predicates – Resolution – Natural deduction.

UNIT – V: Representing knowledge using rules: Procedural Vs Declarative knowledge – Logic programming – Forward Vs Backward reasoning – Matching – Control knowledge – Brief explanation of Expert Systems – Definition – Characteristics – architecture – Knowledge Engineering – Expert System Life Cycle – Knowledge Acquisition Strategies – Expert System Tools.




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TEXT BOOK:

Elaine rich and Kelvin Knight, "Artificial Intelligence ", Tata McGrawhill Publication, 2nd Edition, 1991.(chapters 1- 6).

REFERENCE BOOKS :

1. "Artificial Intelligence a modern Approach ", Stuart Russell & Peter Norvig, 2nd Edition Perason Education.
2. "Artificial Intelligence ", George F Luger , 4th Edition , Pearsons Education Publ, 2002.
3. "Foundations of Artificial Intelligent and Expert Systems", V S Janaki Raman, Ksarukesi, P Gopalakrishnan, Macmillan India Limited.,

QUESTION PAPER PATTERN		
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ACTIVITIES



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DEPARTMENT OF COMPUTER APPLICATIONS


Seminar on Cybersecurity and Programming Skills on 20.01.2020 & 21.01.2020

A Seminar on Cybersecurity and Programming Skills using Python was organized by Department of Computer Applications on 20th January, 2020 & 21st January, 2020. The resource persons are **Mr.K.Boopathikumar & G.Suresh, C Cube Technologies, Erode**. The aim of this seminar is to give the basics of Cybersecurity and programming skills using python. The students gain knowledge about the various opportunities in cybersecurity and the fundamental concepts in python programming. He cleared the doubts of participants in the query session.

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Department of Computer Applications

Organize a
Seminar on Cyber Security and Programming Skills



Resource Person
Mr.K.Boopathikumar & G.Suresh,
C Cube Technologies,
Erode.

Date: 20.01.2020 & 21.01.2020
Venue: PG Seminar Hall
Time: 10.00 AM





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DEPARTMENT OF COMPUTER APPLICATIONS

Seminar on Open Source Programming On 22.01.2020

A Seminar on Open Source Programming was organized by Department of Computer Applications on 22nd January, 2020. The seminar was delivered by **Dr.A.Muthusamy, Associate Professor & Head, Department of Computer Science, Dr.N.G.P Arts and Science College, Coimbatore.** The aim of the seminar is to give knowledge about various open source software available in the market. The resource person addressed the importance of using the various open source software in developing real time applications. He cleared the doubts of participants in the query session.

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Nanjanapuram, Erode-638107
Department of Computer Applications
Organize a Seminar on Open Source Programming




Resource Person
Dr.A.MUTHUSAMY,
Associate Professor & Head,
Department of Computer Science,
Dr. N.G.P. College of Arts & Science,
Coimbatore.

Date: 22.01.2020Time: 10.00 AM to 01.00 PM


Venue: Ramamujam Hall






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DEPARTMENT OF COMPUTER APPLICATIONS


Seminar on E-Commerce and Digital Transactions on 06.02.2020

A Seminar on E-Commerce and Digital Transactions was organized by Department of Computer Applications on 06th February, 2020. The seminar was delivered by **Dr.A.Muthusamy, Associate Professor & Head, Department of Computer Science, Dr.N.G.P. Arts and Science College, Coimbatore.** The aim of the seminar is to give the basics of E-Commerce and Digital Transactions. The resource person covered the topics such as online marketplaces, e-commerce platforms, marketing, B2B E-Commerce and B2B Technology. He cleared the doubts of participants in the Query session.




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