Gondwana University, 
Gadchiroli

Choice Based Credit System (CBCS) 
Syllabus 
Of 
B.C.A. - III Semester – V & VI 
(Three Years Degree Course) Prepared by 
I.T. And Application Board 

2019-2020
## BCA III (Semester V)

<table>
<thead>
<tr>
<th>Subject</th>
<th>Paper Code</th>
<th>Paper Name</th>
<th>Total Period#/Week</th>
<th>Credit</th>
<th>% of Assessment</th>
<th>Min. Passing (40%)</th>
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<td><strong>Discipline Specific Elective Course</strong></td>
<td>UBCAT501.1</td>
<td>Theory of Computational Analyzer</td>
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Total: 22 / 250 / 300 / 550 / 220

**Note:**
1) In a Group, if any student remains absent in one of the paper then candidate result will be considered as fail in that group even though he/she has scored minimum passing marks in other paper of that group. Candidate need to appear in both the papers of that group.
2) In Practical student must appear External Practical Exam conducted by University in order to clear practical exam.
UNIT-I: FINITE AUTOMATON

Finite State Machine: Finite automaton Model, Acceptance of Strings and Languages, Types of FA (Deterministic Finite Automaton, Non-Deterministic Finite Automaton, NFA with ε Moves, Two way Deterministic Finite Automaton), Construction of DFA, Construction of NFA, Equivalence between NFA and DFA, Conversion of NFA into DFA.

UNIT- II: REGULAR EXPRESSION&CONTEXT FREE GRAMMAR


UNIT- III: PUSH DOWN AUTOMATON AND TURING MACHINE


UNIT- IV: INTRODUCTION TO COMPILER


Books:

References:
UNIT I: INTRODUCTION TO JAVA SCRIPT

Features of JavaScript, Structure and Basic Syntax of JavaScript, Data Types, Operators Supported By JavaScript, Control Structure, Dialog Boxes Supported By JavaScript, Functions In JavaScript Built In Function, User Defined Function, Recursion, Arrays. **JavaScript Document Object Model** - Built-In Objects In JavaScript, String Object, Math Object, Date Object, Boolean Object, Number Object, User Defined Objects, Handling (WEB PAGE) Events Using JavaScript.

UNIT II: INTRODUCTION TO VBSCRIPT


UNIT III: CSS

Creating Style Sheet, CSS Properties, CSS Styling(Background, Text Format, Controlling Fonts) Working with Block elements and Objects, Working with Lists and Table, CSS Id and Class Box Model(Introduction, Border properties, Padding Properties, Margin properties),CSS Advanced(Grouping, Dimension, Display, Positioning, Floating, Align, Pseudo class, Navigation Bar, Image Sprites, Attribute sector),CSS Color Creating page Layout and Site Designs.

UNIT IV: INTRODUCTION TO XML

What is XML, XML verses HTML, XML Terminology, XML Standards, XML Syntax Checking, the idea of mark-up, XML Structure, Organizing information in XML, Creating well-formed XML, and XML Namespaces. **DTD** - Introduction to DTD, Document Type Declaration, Element Type Declaration, Attribute Declaration, Conditional Section, Limitations of DTD.

Books:
1) Dr. S.B. Kishor, S.S. Gudelliwar, Dr.Rajani D. Singh, “WEB DESIGNING (HTML, JAVA


References:
UNIT I: FEATURES OF PYTHON
General Description of Python, Magic of Python, Elements of Program, Output Statements, Lexical Matters Writing and executing simple program, Built-in Data Types, Declaring variables, Assignment Statement, Computing with Numbers:- Numeric Data Type, Using Math Library, Type Conversion. **Input-Output:** Printing on screen, reading data from keyboard.

UNIT II: COMPUTING WITH STRINGS
The String Data Type, String Processing, String and Secret Codes, Output as a String Manipulation. **Statements:** Import, Print, if: elif: else, for, while, try: except, raise, with **Collections:** Lists, Dictionaries – Concept of dictionary, techniques to create, updates & deletes dictionary items.

UNIT III: FUNCTIONS

UNIT IV: OBJECT AND GRAPHICS
The Object of Objects, Graphics Programming, Using Graphical Objects, Graphing Future Value, Choosing Coordinates, Interactive Graphics, Graphics Module Reference, **GUI Applications:** Introduction, PyGtk, Message dialog box, Input dialog box, File selection dialog box, Easy GUI.

**Books:**

**References:**
UNIT I: DATA PROCESSING AND DATA WAREHOUSING
Data Processing: Data and Information, Value of Information, Quality of Information, Information Life Cycle, Need of Data Processing, Database Terminology, Types of Database, Database Approach, MIS, KMS, BI

Introduction to Data Warehousing: Data Warehousing Architecture, Data Warehousing Design Consideration, Components of Data Warehousing, Data Cleaning, Data Integration and Transformation, Data Reduction, Data Decentralization. Tools for Data Warehousing.

UNIT II: OLTP AND OLAP SYSTEM
Introduction to OLAP definitions, Characteristics, Demand, Features, Advantages and Disadvantages and Functions. Working of OLAP, OLAP Operation: Roll Up, Drill Down, Dice, Slice, Pivot. Types of OLAP Server. OLTP, Comparison between OLTP and OLAP

UNIT III: METADATA AND DATA MARTS
Metadata Definition, Granular Data, Data Marts Definition and Types, Data Requirements for Data Marts: External Data, Reference Data, Data Model for Data Mart, Steps in implementing a data mart, Maintenance of Data Marts, Performance Issues and Security in a Data Mart.

UNIT IV: DATA MINING
Introduction to Data Mining, From Data Warehousing to Data Mining, Data Mining Functions, Major Issues in Data Mining, Steps of Data Mining, Data Mining Algorithm : Database Segmentation, Link Analysis & Predictive Modelling, Data Mining Tools, Applications of Data Mining.

Text Books:
3. Dr. S. B. Kishor, Database Management System, Das Ganu Prakashan

Reference Books:
1. Introduction to Data Mining – Tan, Steinbach, Vipin Kumar, Pearson Education.
3. System Analysis and Design, Dr. S. B. Kishor, Das Ganu Prakashan
UNIT - I: INTRODUCTION TO SOFTWARE ENGINEERING


UNIT - II: PROCESS MODELS


UNIT - III: SYSTEM MODELS


UNIT - IV: TESTING STRATEGIES

Testing Strategies: A strategic approach to software testing, test strategies for conventional software, Black-Box and White-Box testing, Validation testing, System testing, the art of Debugging. Product metrics: Software Quality, Metrics for Analysis Model, Metrics for Design Model, Metrics for source code, Metrics for testing, Metrics for maintenance. Metrics for Process and Products: Software Measurement, Metrics for software quality.

Books:

Reference:
UNIT I: INTRODUCTION OF OPERATION RESEARCH

UNIT II: LINEAR PROGRAMMING AND ASSIGNMENT PROBLEM

UNIT III: STATISTICAL DATA COLLECTION

UNIT IV: REGRESSION ANALYSIS

Books:
3. Basic of Computer and Statistical Techniques – Dr. Rahul Sawlikar and Dr. S. B. Kishor,
UNIT I: INTRODUCTION OF JAVA

Introduction of Java: Features of Java, Java Applications, JDK Environment, Structure of Java Program, Java coding Conventions. Basic Concepts of Java: Identifiers and Keywords, Constants, Variables: -Variable naming, variable initialization, assign values, Rules of variables, Scope of variable, Data Types in Java.


UNIT II: CLASSES OBJECTS


UNIT III: PACKAGES

Packages: Importing Packages and Classes, User defines packages, Exception Handling: Types of Error, Throwable Class, Types of Exceptions, try, catch, finally, throws keywords, creating your own exception, exceptions and Inheritance. Multithreading: Multithreading Concept, Thread Life Cycle, Creating multithreading Application, Thread Priorities, Daemon Thread, Thread synchronization.


UNIT IV: ABSTRACT WINDOW TOOLKIT


Books:
1) Dr. S. B. Kishor, Dr. Rajani Singh “Programming in JAVA”, Das Ganu Pub.

References:
2) Jerry R Jackson Alan L, “Java by Example 1.2”, McClellan Publication
B.C.A. - III (SEMESTER – V)  
PAPER- III (Elective II) - : Computer Graphics  
[Max. Marks: 40]

UNIT – I: INTRODUCTION
Geometry & Line Generation – Introduction, Vectors, Pixels and Frames Buffers, Vector Generation, 
Character Generation, Displaying the Frame Buffer. Graphics Primitive – Introduction, Applications of 
Graphics, Display Devices, Primitive Operations, the Display File Interpreter, Normalized Device 
Coordinator, Display File Structure, Display Control, Text Line Style Primitive.

UNIT – II: POLYGONS, TRANSFORMATIONS & SEGMENTS
Polygons – Introduction, Polygons, Polygon Representation, Entering Polygon, An Inside Test, Filling 
Polygons. Transformations – Introduction, Matrices, Scaling Transformation, SIN & COS, Sum of Angles 
Identifier, Rotation, Homogeneous Coordinates and Translation, Rotation about an Arbitrary Point, Other 
Transformation, Display Procedures. Segments – Introduction, Segment Table, Segment Creation, Closing 
the Segments, Other Display File Structure, Raster Technique.

UNIT – III: WINDOWING & 3D GEOMETRY
Windowing & Clipping - Introduction, Viewing Transformation, Viewing Transformation Implementation, 
Clipping, Clipping of Polygons, Adding Clipping to the System, Generalized Clipping, Position Relative to an 
Arbitrary Line, Multiple Windowing. Interaction – Introduction, Hardware, Input Devices Handling 
Algorithms, Event Handling, Delectability Attributes, Simulating a Locator with a Pick, Pick with a Locator, 
Echoing, Interactive Technology. Three Dimension Geometry – Introduction, 3D Geometry, Primitives and 
Transformation, Rotation about an Arbitrary Axis, Parallel Projection, Perspective Projection, Special 
Projection, Viewing Parameters, and Conversation to View Plan Coordinate 3D Viewing Transformation.

UNIT – IV: SURFACE, SHADING & CURVES
Hidden Surface and Lines – Introduction, Back Face Removal, Painters Algorithm, Collection of Polygons, 
Remembering the Style, Hidden Surface Check. Shading – Introduction, Diffusion, Illustration, Point- Source 
Illustration, Specular Reflection, Transparency and Shadow. Curves – Introduction, Curve Generation, 
Implementation, Interpolating Polygon, B-Spines and Curves.

Books:
1) Dr. S.B.Kishor, Bharti R. Dikhit,” Computer Graphics”, Das Ganu Pub,  

References:
1) Newman & Sproul, ”Interactive Computer Graphics “  
   ISBN-0-07-047371-4
UNIT I: SQL SERVER ARCHITECTURE

SQL Server Architecture: SQL Server Data Storage Architecture, Data Engine, System Databases. SQL Components: SQL’s Basic Object, Data Types, Transact-SQL Functions, Scalar Operators, Null Values. Data Definition Language, Data Manipulation Language, Queries, Modification of Table Contents, Stored Procedures and User-Defined Functions.

UNIT II: SQL SERVER OVERVIEW


UNIT III: QUERY, JOINS, VIEW


UNIT IV: CURSOR, PROCEDURE and TRIGGERS


Books:

References:
B.C.A. - III (Semester-V)

Paper-IV (Elective I): COMPUTERS FOR MANAGER

[Max Marks: 50]

Unit I
History of Internet, Internet Applications, Introduction to MIS, structure of MIS, ERP, CRM, SCM.

Unit II
Business Intelligence, Business Analytics: Online Analytical Processing Reporting and Querying, Online Analytical Processing.

Unit III
Data Text Web Mining and Predictive Analytics, Text Mining, Web Mining, Predictive Analytics.

Unit IV
Data Visualization, Geographic Information Systems (GIS), Virtual Reality, Real-Time Business Intelligence (BI), Competitive Intelligence (CI), the Role of Scorecards and Dashboards in Performance Management.

Books:

1. Computer for Manager, Dr. S. B. Kishor, Dr. Niyaz Sheikh, Dr. Chitra Dhawale, Dr. Rajani Singh, Das Ganu Publication

B.C.A. - III (SEMESTER – V)
Paper –IV (Elective II) -: A Certification Course from IIT Spoken Tutorial, Mumbai
[Max. Marks: 50]

Enroll and Select any one course from IIT Spoken Tutorial, Mumbai

Note: - Submit Certificates/Marksheet before the Start of Final Practical Examination of Gondwana University, Gadchiroli
UNIT- I SPOKEN ENGLISH BASIC COURSE

UNIT-II COMMUNICATION SKILLS

UNIT –III GROUP DYNAMICS &TEAM BUILDING
Group Dynamics, Importance of groups in organization, Team Interactions in group, How to build a good team? Personality Development: Inner Personality Development, Role of motivation & body language, Filling the GAP- Grooming, Attitude, Personality. Creative Thinking: Express creativity in everyday situations, know the creative thinking process, and develop a positive attitude.

UNIT-IV BUSINESS WRITING
Use of Simple structure while writing, apply a positive tone in business communication. Time Management: Time as a Resource, Identify Important Time, Management Wasters, Techniques for better Time Management. Motivation: Introduction to Motivation, Relevance and types of Motivation.

Books:
- Sourav Das ,” The Personality Development Book”

Reference:
- Barun Mitra ,”Personality Development and Soft skills”, Oxford publications
B.C.A. - III (SEMESTER – V)  
Paper –IV (Elective IV) -:: Accounting & Office Management  
[Max. Marks: 50]

UNIT I: CONCEPT OF OFFICE MANAGEMENT

UNIT II: OFFICE ORGANIZING
Meaning and definition of office organization, Importance of office organization Principles of office organization, Types of office organization, Meaning and definition of Delegation of Authority, Responsibility, Importance, features and factors of delegation of authority and responsibility, Principles of Delegation of Authority and responsibility, Problems in Delegation of Authority and responsibility, Job specialization, Job analysis and Job description, Meaning and Importance of organizational Relationship, Meaning of Span of Authority, Informal Organization, Conflict in Organization, Causes of organizational change.

UNIT III: OFFICE COMMUNICATION
Meaning and definition of Communication, Importance of Communication, Features of Communication, Elements of Communication, Scope of Communication, Types and Media of communication, Principles of communication, Barriers in communication, Meaning, definition and principles of coordination, Relation between coordination and communication.

UNIT IV: OFFICE MANUALS

Books
1) Introduction to Computers, Dr Darrell W Hajek, ISBN-10: 1545236461
2) Bank Financial Management, Indian Institute of Banking and Finance, McMillan Education Publication
1) Write a JavaScript to find absolute number.
2) Write a JavaScript to Demonstration of Type of Operand.
3) Write a JavaScript to check whether entered number is Positive or Negative or Zero.
4) Write a JavaScript code to demonstrate to switch case.
5) Write a JavaScript to find the sum of first N natural numbers
6) Write a JavaScript to find sum of each digit of a number.
7) Write a JavaScript to demonstrate of Array objects for accepting and displaying list of names in descending order.
8) Write a JavaScript to Check entered String is palindrome or not.
9) Write JavaScript to demonstrate a Date Objects for displaying current day and check current year is leap or not.
10) Write a JavaScript to demonstration of eval function.
11) Design a program for displaying marks and percentage of student in JavaScript using event handling.
12) Write a Vbscript program to find the factorial of given number.
13) Write a Vbscript to demonstrate the program to find largest among two numbers.
14) Write Vbscript to create dialog boxes.
15) Demonstration of array in Vbscript.
1) Write a Program to display “Hello World” on to the console.

2) Write a Program to create a class which contains two methods with the same name but with different method signature. (method overloading)

3) Write a Program to exhibit method overriding where calculate() method of super class is overridden by the calculate() method of subclass.

4) Write a Program to use super class reference to call calculate() method.

5) Write a Program to explain the concept of constructor and parameterized constructor.

6) Write a Program to explain the concept of inheritance.

7) Write a Program to access the super class method and instance variable by using super key from subclass.

8) Write a Program to prove that the default constructor of the super class is available to subclass by default.

9) Write a Program to create an abstract class with an abstract method and then create a concrete class which provides the implementation to abstract methods of abstract class.

10) Write a Program to implement multiple interfaces simultaneously.

11) Write a program to explain the concept of „this” keyword.

12) Write a program to create a thread and explain the use of the methods run() and start().

13) Write a program to create an Applet and uses all the methods of Applets class.

14) Write a program to create a Frame and has a button that response to the users action. (Tip: create a class that extends Action Listener).

15) Write a program to explain any one of the layout machines used in Java.

16) Write a program to bypass the generated exception from present method to the caller method by using throws keyword.

17) Write a program to develop an applet to print the life cycle methods of applet on the HTML page.
1) Write a program for vector generation line algorithm.
2) Write a program for generating line by using Bresenham algorithm.
3) Write a program for draw the house.
4) Write program to fill the rectangle
5) Write a program to draw a Circle.
6) Write a program to draw an N-sided polygon.
7) Write a program to draw an Arc.
8) Write program to draw an angle theta.
9) Write a program to draw a Bezier Curve.
10) Write program to rotate line segment by an angle.
11) Write program to translate the line.
12) Write a program to scaling the image.
13) Write a program to shearing the image.
14) Write a program to draw a parabola using formula
15) Write a program to draw an ellipse using formula.
16) Write a program to draw a hyperbola using formula.
The seminar must be based on some current trends related to IT / Computer Science / Computer Application. A Student must present the Power Point presentation along with Seminar Report. Students are requested to follow the following guidelines while choosing & preparing their seminars.

Guide lines to B.C.A. Seminar

1) Name of seminar topic must be latest to the current trends and should not be repeated but can be extended from previous semester.

2) Seminar topic is to be approved by the concerned guide before the deadline prescribed by university time-table.
3) Seminar should be given individually.

4) Students are allowed to use graphics / animation / audio-video aids for their presentation.

5) Seminar work comprised of ONLY Internal examination.

6) Students are requested to submit their seminar reports on or before the dead line with the concern of their respective guide otherwise students will be responsible for any appropriate action.

7) Seminar Report should be typed / printed in double line space using A4 size bond papers with a left margin of 1.5”and right margin of 1.0” with proper spiral binding to be done.

8) Students are requested to obtain necessary certificates and declaration to be duly enclosed in the report.
## BCA III (Semester VI)

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<th>Subject</th>
<th>Paper Code</th>
<th>Paper Name</th>
<th>Total Period#/Week</th>
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**Note:**
1) In a Group, if any student remains absent in one of the paper then candidate result will be considered as fail in that group even though he/she has scored minimum passing marks in other paper of that group. Candidate need to appear in both the papers of that group.
2) In Practical/Project student must appear **External Practical Exam** conducted by University in order to clear practical/Project exam.
(Select Any Two)  
**B.C.A. - III (SEMESTER – VI)**  
PAPER- I (Elective I) --: .NET & C#. NET  
[Max. Marks: 40]

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**UNIT I: .NET FRAMEWORK**


**UNIT II: WINDOWS FORMS AND CONTROLS**

*Windows Forms and Controls*: All about windows Forms, Adding controls to Forms, Handling Events, MsgBox Function, InputBox Function, Text Boxes, Rich Text Boxes, Labels, Buttons, Checkboxes, Radio Buttons, List Boxes, Combo Boxes, Picture Boxes, and Menus.

**UNIT III: C# PROGRAMMING**


**UNIT IV: MANIPULATING STRINGS & CLASSES AND OBJECTS**

*Manipulating Strings & Classes and Objects* : String Methods, Inserting Strings, Comparing Strings, Finding Substrings, Mutable Strings, Array of Strings, Defining a Class, Creating Objects, Accessing Class members, Static Constructors, Private Constructor, The „this” Reference, Read-only Members, Properties, Overriding Methods, Abstract Classes, Abstract Methods, Sealed Classes, Sealed Methods

**Books:**


**References:**


UNIT I: INTERNET CRIME

Internet Crime: Internet Crime: Definition, Types of Internet Crime, Hacking and Cracking, Cyber Terrorism, Child Pornography, Stalking, Cyber Theft, Cyber Fraud, Phishing, Password Cracking, Evidence Collection, Email Tracing, Internet Fraud.

UNIT III: CRYPTOGRAPHY


UNIT II: SECURITY


UNIT IV: CYBER LAW


Books:

References:
UNIT-I: INTRODUCTION TO ORACLE DATABASE ADMINISTRATION


UNIT-II: ORACLE DATABASE ARCHITECTURE AND ADMINISTRATION


UNIT-III: FUNDAMENTALS OF DISTRIBUTED COMPUTING


UNIT-IV: MESSAGE PASSING


Books:

References:
Instruction
Towards the end of the second semester of study, a student will be examined in the course “Project Work”.

A. Project Work may be done individually or in groups (Maximum 3 students) in case of bigger projects. However if project is done in groups, each student must be given a responsibility for a distinct module and care should be taken to monitor the progress of individual student.

B. The Project Work should be done using the tools covered in B.C.A

C. The Project Work should be of such a nature that it could prove useful or be relevant from the System-oriented/Application/commercial / management angle.

D. The project work will carry 100 marks.

E. The external viva-voce examination for Project Work would be held as per the Examination Time Table of the second year of study, by a panel of one external and one internal examiner.

Types of Project

The Applications Areas of project - Financial/Marketing/Database Management System/ Relational Database Management System/E-Commerce /Internet/ Manufacturing/ web Designing/Hardware and Software interaction based etc.

Project Proposal (Synopsis)

The project proposal should be prepared in consultation with the guide. The project guide must be a person having minimum Qualification MCA/M.Sc. (Computer)/ M.Sc. (IT/ Math"s/Electronics/Statistics/Physics + Post B.Sc. Dip. In Comp. Sc. & Appl.)

The project proposal should clearly state the objectives and environment of the proposed project to be undertaken. It should have full details in the following form:

1. Title of the Project
2. Objectives and Hypothesis of the Project
3. Project Category (DBMS/RDBMS/OOPS/Web Designing/Internet etc.)
4. Tools/Platform, Languages to be used
5. A complete Structure of the program:
   i. Analysis.
   ii. Numbers of Modules.
   iii. Data Structures or Tables
   v. Types of Report Generation.

**Project Report Formulation:**

1. Title Page.
3. Declaration Page.
5. Index or Content Page.
6. Documentation.
   i. Introduction/Objectives.
   ii. Preliminary System Analysis.
   iv. System Design.
   vi. Input screen & Output Screen.
   vii. Features of Project and its Limitations
   ix. Future Scope of the project.
   x. Bibliography

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<th>Distribution of Mark of Project on the basis of following</th>
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<td><strong>Module</strong></td>
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<td>a) Synopsis relevance with that of final work</td>
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<td>b) Project Work</td>
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<td>c) Project Report</td>
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<td>d) Presentation of Project Work</td>
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<td><strong>Total</strong></td>
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UNIT I: AWT & SWING


UNIT II: JDBC

Overview: JDBC-ODBC Bridge, Java SQL Package and JDBC Related Classes, Architecture of JDBC Application, Interface of JDBC, Types of Driver, Creating C-S Application Using JDBC Oracle/Access Databases.

UNIT III: SERVLETS

Introduction of Servlet: Servlet Methods, Generics Servlets, Httpservlets, Methods of Httpservlets Class, Httpservlets request, Httpservlets response, dogets and do post Method, Cookies, Methods of Class Cookies, Session Tracking, C-S Application Using Servlets.

UNIT IV: NETWORKING


Books:


Reference:

UNIT I: INTRODUCTION TO PROLOG

Introduction to Prolog: Introduction to Prolog, Converting English to Prolog facts and Rules, Goals, Prolog Terminology, Matching in Prolog, Cut, Backtracking, Fail, Recursion, Lists and Control Structure.

Introduction to A.I.: Definition of AI, AI Technique, Tic-Tact-Toe, Level of the Model, Criteria for Success, Problems and Problems Spaces, Defining the Problem.

UNIT II: PROBLEM SOLVING


Heuristic Search: Hill Climbing, Best-First Search, Problem Reduction, Constraint Satisfaction, Means-Ends Analysis.

UNIT III: KNOWLEDGE REPRESENTATION


UNIT IV: NATURAL LANGUAGE UNDERSTANDING


Books:


References:

UNIT –I: DIGITAL IMAGE INTRODUCTION

UNIT-II: IMAGE PROCESSING ENHANCEMENT

UNIT-III: IMAGE COMPRESSION

UNIT-IV: IMAGE ANALYSIS AND FEATURE EXTRACTION EDGE AND LINE DETECTION
Edge Detection, Derivation operators, Pattern Filling Approach, Morphologic Edge Detection, Edge Linking and Edge Following, Edge elements Extraction by Thresholding, Edge Detector Performance, Line Detection, and Corner Detection. Recognition: Deterministic Methods, Clustering, Statistical Classification, Mathematical Recognition, Syntactic Recognition, Grammar, Recognition Strategy, Tree search, Graph Matching.

Books:

References:
1) Adrian Low, Computer vision and Image Processing, McGraw Hill (1991)
2) Kenneth R. Castle man, Digital Image Processing, PHI
UNIT- I: PROJECT MANAGEMENT

Project Management: Management Spectrum, the People, the Product, the Process, the Project, Project Manager-Role and Responsibilities, Project Estimation – Introduction, Decomposition Techniques-Software Sizing, Problem Based Estimation, Loc Based, FP Based Estimation.

UNIT – II: PROJECT SCHEDULING

Project Scheduling: Basic Concepts, Project Scheduling, Basic Principles, Relationship between People and Effort, Effort, Effort Distribution, Definition A Task Network- CPM/PERT, Gantt chart.

UNIT – III: MICROSOFT PROJECT

Microsoft Project: Introduction Microsoft Project, Menu Bar, Using the Toolbars: Using Tool Tips, Using the Standard Toolbar, Using the Formatting Toolbar, Open, Save, Save as Views, Changing to Calendar View, Changing the Look of the Calendar – (for Printing). Using the Gantt Chart View: Opening the Gantt Chart View, Using the Components of the Gantt Chart View, Moving the Border Between the Panes., Understanding the Project Information: Starting a New Project, Using the Project Information, Window.

UNIT – IV: ADVANCED MICROSOFT PROJECT


Books:

1) Elias M. Award, “System Analysis and Design”, Galgotia Publication

References:

UNIT- II: PRINCIPLES OF MEDIA MANAGEMENT
Principles of media management and their significance. Media as an industry and profession.

UNIT- II: OWNERSHIP
Ownership patterns of mass-media in India: sole proprietorship, partnership, private limited companies, Public limited companies, trusts, co-operatives, religious institutions (societies) and franchises (chains).

UNIT –III: INDIAN MEDIA
Foreign equity in Indian media (including print media) and Press Commissions on Indian newspaper. Management structure, Organizational structure. Functions of different departments: General Administration, Editorial, Finance.

UNIT- IV: CIRCULATION AND MARKETING
Circulation (sales promotion), Marketing (Advertising), Human Resource and Production. Economics of print and electronic media.

BOOKS:


Enroll and Select any one course from Certification Course from MOOC

Note: - Submit Certificates/Marksheet before the Start of Final Practical Examination of Gondwana University, Gadchiroli
UNIT – I SOURCES, COMPOSITION AND CHARACTERISTIC
Sources, Composition and characteristic of hazardous waste, Hazardous Waste (Management and Handling) Rules, 1989 and amendments, Federal Hazardous Waste Regulations under RCRA, Superfund, CERCLA and SARA. Toxicology, public health impact, Protocols, issues and challenges in transportation of hazardous waste.

UNIT – II CHARACTERIZATION OF MEDICAL WASTE

UNIT – III TREATMENT METHOD

UNIT – IV E-WASTE

Books:
2. CPHEEO Manual on Municipal Solid Waste Management.

Reference Books:
Unit-I: Nature of Management

Unit-II: Evaluation of management
Contribution of F.W.Taylor, Henry Fayol, Elton Mayo chester Barhard and Peter Drucker to the management (i.e School of management thought) Indian Management Thought.

Unit-III: Functions of Management

Unit-IV: Recent Trends in Management:

Books Recommended
2. Management Theory and Practice- J. N. Chandan
3. Principal of Management – S. B. Kishor, Das GanuPrakashan
5. Principles and Practice of Management- Dr. L.M. Prasad, Sultan chand a & Sons – New Delhi
1. Write a program in C# to check whether given program is even or odd.
2. Write a program in C# to swap two numbers.
3. Write a program in C# to check whether the entered number is leap year or not.
4. Write a program in C# to display ATM transactions.
5. Write a program in C# to find a number using Pythagoras theorem
6. Write C# code to declare a variable to store the age of a person.
7. Write C# code to display the asterisk pattern as shown below:
   
   *****
   *****
   *****
   *****
   *****

8. Write a C# program that prompts the user to input three integer values and find the greatest value of the three values.
9. Write a C# program that determines a student’s grade.
10. Write C# program to print the table of characters that are equivalent to the ASCII codes from 1 to 122.
11. Write a program in C# to create a function to input a string and count number of spaces are in the string.
12. Write a program in C# to calculate the sum of elements in an array.
13. Write programs using conditional statements and loops:
    i. Generate Fibonacci series.
    ii. Generate various patterns (triangles, diamond and other patterns) with numbers.
    iii. Test for prime numbers.
    iv. Generate prime numbers.
    v. Reverse a number and find sum of digits of a number.
    vi. Test for vowels.
    vii. Use of for each loop with arrays.

14. Object oriented programs with C#
    a) Program using classes.
    b) Program with different features of C#
       i. Operator Overloading
       ii. Inheritance (all types)
       iii. Interfaces
       iv. Using Delegates and events.

15. Write program to demonstrate exception handling.
1. Write a program to create Employee Table using Statement Interface.
2. Write a program to insert a record in employee table by using Statement Interface.
3. Write a program to insert multiple records according to user’s choice in employee table using Statement
4. Write a program to display all employee records using Result set.
5. Write a program to delete the record using Statement Interface.
6. Write a program for Multiple Insertion using prepares statement.
7. Write a program to update a record using prepares Statement.
8. Write a program to establish the connection between java and Oracle by using jdbc-odbc bridge driver.
9. Write a program to display all updated employee records using Result set.
10. Write a program to design Web Application by using Httpservlet to display .Welcome to  Servlet” message.
11. Write a program to design a Web Application by using Generic Servlet to display “Hello” message.
12. Write a program to design Http Servlet web application using do Get method to accept two numbers and perform Addition and Subtraction.
13. Write a program to design Web Application by using Cookies (Having do Get and do get methods).
14. Write a program in which Client Program communicate with server program (Using Networking concept)
15. Write a Java application which accept student name, roll no and sub1, sub2, marks and calculate total marks. Design Frame with Components and event driven program.
16. Write a program to send message from server to client.
1. How to fill color in the image in Photoshop.
2. How to change background color of the image in Photoshop.
3. How to set image in background of the image in Photoshop.
4. How to use liquefy filter in Photoshop.
5. How to use lasso tool in Photoshop.
6. Process in Photoshop to cut image and copy the image by using Alt + Left click mouse.
7. How to use painting in Photoshop.
8. How to adjust mid tone using Photoshop curves panel.
9. How to experiment with 3D Photoshop files.
10. How to create clipping paths in Photoshop.
11. How to use the clone stamp tool in Photoshop.
12. How to use puppet wrap tool in Photoshop.
The seminar must be based on the Project Topic choose by him/her. A Student must present the Power Point presentation along with Seminar Report. Students are requested to follow the following guidelines while choosing & preparing their seminars.

Guide lines to B.C.A Seminar

1) Seminar must be of the Project Topic and should not be repeated.

2) Seminar topic is to be approved by the concerned guide before the deadline prescribed by university time-table.

3) Seminar should be given individually.

4) Students are allowed to use graphics / animation / audio-video aids for their presentation.

5) Seminar work comprised of ONLY Internal examination.

6) Students are requested to submit their seminar reports on or before the dead line with the concern of their respective guide otherwise students will be responsible for any appropriate action.

7) Seminar Report should be typed / printed in double line space using A4 size bond papers with a left margin of 1.5”and right margin of 1.0” with proper spiral binding to be done.

8) Students are requested to obtain necessary certificates and declaration to be duly enclosed in the report.