

Dr. Babasaheb Ambedkar Marathwada University, Aurangabad

Curriculum Structure and Scheme of Evaluation: B.Sc.(I.T.)

| Sr. No. | Paper Number | Name of the Paper Titles | Scheme of Teaching | Scheme of Evaluation(Marks) | | |
|--------------------|--------------|-------------------------------|----------------------------------|------------------------------|--------------------------|-------------|
| | | | Theory / Practical (Lect. /week) | Theory / Practical (Marks) | Exam Duration (in hrs.) | Total Marks |
| I Semester | | | | | | |
| 1 | IT101-T | Computer Fundamentals | 3 | 50 | 2 | 50 |
| 2 | IT102-T | Digital Electronics | 3 | 50 | 2 | 50 |
| 3 | IT103-T | Microprocessor - I | 3 | 50 | 2 | 50 |
| 4 | IT104-T | C Programming – I | 3 | 50 | 2 | 50 |
| 5 | IT105-T | Communication Skill – I | 3 | 50 | 2 | 50 |
| 6 | IT106-T | Mathematical Foundation | 3 | 50 | 2 | 50 |
| 7 | IT107-P | Office Suite | 4 | 50 | 2 | 50 |
| 8 | | C Programming – I | 4 | 50 | 2 | 50 |
| 9 | IT108-P | Microprocessor – I | 4 | 50 | 2 | 50 |
| 10 | | Digital Electronics | 4 | 50 | 2 | 50 |
| II Semester | | | | | | |
| 1 | IT201-T | Data Structure | 3 | 50 | 2 | 50 |
| 2 | IT202-T | Operating System | 3 | 50 | 2 | 50 |
| 3 | IT203-T | I.T.Tools& Web Designing – I | 3 | 50 | 2 | 50 |
| 4 | IT204-T | C Programming – II | 3 | 50 | 2 | 50 |
| 5 | IT205-T | Communication Skill – II | 3 | 50 | 2 | 50 |
| 6 | IT206-T | Numerical Computation Methods | 3 | 50 | 2 | 50 |
| 7 | IT207-P | Data Structure | 4 | 50 | 2 | 50 |
| 8 | | I.T.Tools&Web Designing – I | 4 | 50 | 2 | 50 |
| 9 | IT208-P | C Programming – II | 4 | 50 | 2 | 50 |
| 10 | | Numerical Comp. Methods | 4 | 50 | 2 | 50 |

| Sr. No. | Paper Number | Name of the Paper Titles | Scheme of Teaching | Scheme of Evaluation(Marks) | | |
|---------------------|--------------|----------------------------|------------------------------------|------------------------------|--------------------------|-------------|
| | | | Theory / Practical (Lect. / week) | Theory / Practical (Marks) | Exam Duration (in hrs.) | Total Marks |
| III Semester | | | | | | |
| 1 | IT301-T | Database Management System | 3 | 50 | 2 | 50 |
| 2 | IT302-T | Android – I | 3 | 50 | 2 | 50 |
| 3 | IT303-T | I.T.Tools&Web Designing-II | 3 | 50 | 2 | 50 |
| 4 | IT304-T | Programming in CPP | 3 | 50 | 2 | 50 |
| 5 | IT305-T | Personality Development | 3 | 50 | 2 | 50 |
| 6 | IT306-T | Statistical Method | 3 | 50 | 2 | 50 |
| 7 | IT307-P | Programming in C++ | 4 | 100 | 2 | 100 |
| 8 | | DBMS | 4 | | 2 | |
| 9 | IT308-P | Android – I | 4 | 100 | 2 | 100 |
| 10 | | I.T.Tools&Web Designing-II | 4 | | 2 | |

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|--------------------|---------|--|---|-----|---|-----|
| IV Semester | | | | | | |
| 1 | IT401-T | Advance DBMS | 3 | 50 | 2 | 50 |
| 2 | IT402-T | Advanced Android Application Development | 3 | 50 | 2 | 50 |
| 3 | IT403-T | I.T.Tools&Web Designing-III | 3 | 50 | 2 | 50 |
| 4 | IT404-T | Core Java | 3 | 50 | 2 | 50 |
| 5 | IT405-T | Aptitude and Logical Reasoning | 3 | 50 | 2 | 50 |
| 6 | IT406-T | Software Project Management | 3 | 50 | 2 | 50 |
| 7 | IT407-P | Programming in Java | 4 | 100 | 2 | 100 |
| 8 | | Adv. DBMS using SQL | 4 | | 2 | |
| 9 | IT408-P | Android- II | 4 | 100 | 2 | 100 |
| 10 | | Mini Project | 4 | | 2 | |

B.Sc.(Information Technology)

Semester -III

1 Unit – I: Basic Concept

- Data Definition, Types of Data, Record and File, File based System & Processing
- Database System Application, Purpose of Database System
- Abstraction & Data Integration
- Three level Architecture proposal for a DBMS.
- Component of a DBMS: Users, Facilities & Structure.
- Advantageous & Disadvantageous of DBMS.

Data Modeling & Design

- Data Association – Entities , Attributes & Association, Relationship among Entities, Representation of Association & Relationships
- Data Model: Importance of Data Model, Types of Data Model: Relational, E-R, Semi-structured, Object-Oriented, Network & Hierarchical Data Model. Advantageous & Disadvantageous of above model.

2 Unit – II: Entity-Relationship Data Model

- Entity , Entity Set, Types of Entities, Strong & Weak Entity, Representation
- Attribute, Types of Attributes , Representation
- Relationship : Binary & Ternary , Representation
- Mapping Cardinality, Entity-Relationship Design Issues

Relational Data Model

- Basic Structure of Relational Data Model, Database Schema
- Constraints : Integrity Rule 1 & 2
- Normal Form: Anomalies, Functional Dependency, Dependency Diagram, First Normal Form, Second Normal Form, Third Normal Form, Conversion from Universal to 1 NF, 1NF to 2 NF and 2NF to 3NF.

3 Unit – III: Relational Algebra

- Basic Operation – Union , Intersection, Difference and Cartesian Product
- Advance Operation- Projection, Selection, Join (Inner and Outer) & Division
- Examples based on above Operation.
- Relation Algebraic Queries.

Introduction to Oracle

- Oracle Software : Versions of Oracles, Products of Oracle, Tools of Oracle
- SQL: Logging to SQL/ iSQL, SQL plus worksheet.

Books:

- 1) Database System Concepts (Sixth Edition) AviSilberschatz, Henry F. Korth,S. Sudarshan
- 2) An Introduction to Database Systems by Bipin C. Desai

3) Easy Oracle SQL: Get Started Fast Writing SQL Reports with SQL*Plus By John Garmany

4) Mastering Oracle SQL By Sanjay Mishra, Alan Beaulieu

Course: B.Sc.(I.T.)

Semester : III

Topic: Android-I

Paper No.: IT302-T

1 Unit – I

Environment Setup: Setup Java Development Kit (JDK), Android SDK, Eclipse IDE, Android Development Tools (ADT) Plugin, Create Android Virtual Device. Architecture: Linux kernel, Libraries, Android Runtime, Application Framework.

Application Components

Application Components Activities, Services, Broadcast Receivers, Content Providers, Additional Components, Create Android Application, Anatomy of Android Application, The Main Activity File, The Manifest File, The Strings File, The R File, The Layout File, Running the Application.

2 Unit-II

Resources Organizing & Accessing: Alternative Resources, Accessing Resources

Intents and Filters: Intent Objects, Action, Android Intent Standard Actions, Data, Category, Extras, Flags, Component Name, Types of Intents: Explicit Intents, Implicit Intents.

UI Layouts

Android Layout Types, RelativeLayout Attributes, GridView Attributes, Sub-Activity, Layout Attributes, View Identification, UI Controls, Android UI Controls, TextView Attributes, AutoCompleteTextView Attributes, Button Attributes, ImageButton Attributes, CheckBox Attributes, ToggleButton Attributes, RadioButton Attributes, RadioGroup Attributes.

3 Unit-III

Event Handling:

Event Listeners & Event Handlers, Event Listeners Registration, Styles and Themes, Defining Styles, Using Styles, Style Inheritance, Android Themes, Default Styles & Themes, Custom Components, Creating a Simple Custom Component.

Books & References:

1) Android Tutorial, Simply Easy Learning by tutorialspoint.com.

Link:http://www.tutorialspoint.com/android/android_tutorial.pdf

2) Professional Android 4 Application Development :Retomeier, Wrox publication.

- 3) Andriod Apps for Absolute beginners : Wallace Jadson, Apress.
- 4) The Complete Andriod Guide: Kevin Purdy
- 5) Javapoint Tutorial : <http://www.javapoint.com/andriod-tutorial>

1 Using the Forms API:

- Overview of HTML5 Forms,
- Understanding Web Communication: web server, web browser, Http protocol basics, Http Methods,
- Using the HTML5 Forms APIs,
- New Form Elements, Attributes and Functions
- Checking Forms with Validation,
- Validation Fields and Functions: Required, format, Number and Range, Styling validation.
- Building an Application with HTML5 Forms.

2 Working with Drag-and-Drop

- Web Drag-and-Drop,
- Drag-and-Drop Event Flow,
- Transfer and Control,
- Building an Application with Drag-and-Drop,
- Handling Drag-and-Drop for Files

3 Working with JQuery

- Benefits of using JQuery, Getting started with JQuery
- JQuery Install, JQuery Syntax,
- JQuery Selectors
- JQuery Event Methods
- JQuery Effects: Fading, Sliding , Animation
- JQuery Callback Function, Chaining
- JQuery Get & Set Content and Attributes,
- JQuery Add and Remove Elements
- JQuery Get and Set CSS Classes

Books:

- 1) Programming in HTML5 with Javascript and CSS3 , Glenn Johnson
(http://www.daoudisamir.com/references/vs_ebooks/html5_css3.pdf)
- 2) Beginning HTML5 and CSS3 By Richard Clark, OliStudholme, Christopher Murphy and DivyaManian.(http://www.alvinisd.net/cms/lib03/TX01001897/Centricity/Domain/1077/beginning_html5_and_css3.pdf)
- 3) jQuery Cookbook O'Reilly Publication,
- 4) <http://jqfundamentals.com/>

1 Unit – I:Introduction of OOPs

Procedural Vs Object Oriented Programming, Basic concepts of Object Oriented Programming, Class, Object, Data Abstraction, Encapsulation, Inheritance, Polymorphism, Dynamic Binding, Message Passing. Benefits and applications of OOP, History and overview of C++, C++ program structure. Reference variables, Scope resolution operator, Member dereferencing operators, new and delete, cin and cout, The endl and setw manipulator.

Functions in C++:

Function prototype, Call by reference (using reference variable), Return by reference, Inline function, Default arguments, Const arguments.

2 Unit – II: Function overloading:

Different numbers and different kinds of arguments,

Objects and Classes:

Specifying a class, private and public, Defining member functions, Nesting of member function, Object as data types, Memory allocation for objects, static data members and member functions. Array of objects, Objects as function argument, returning objects, Friend function and its characteristics.

3 Unit – III:Constructors and Destructors:

Introduction, default and parameterized constructors, Multiple constructors in a class, Copy Constructor, Destructors

Operator Overloading:

Overloading unary operators, Rules for operator overloading, Overloading without friend function and using friend function, Overloading binary operators such as arithmetic and relational operators, Concatenating Strings, Comparison operators.

Reference Books:

1. Object Oriented Programming with C++ E. Balagurusamy, Tata McGraw-Hill Publishing
2. Object Oriented Programming In C + + Robert Lafore, Galgotia
3. Let us C++ YeshwantKanetkar; bpb publication

1 Unit-I

Introduction

Definition & Basics of Personality, Determinants of Personality- biological, psychological and socio- cultural factors., Need for personality development

Self-Awareness and Self Motivation

Self analysis through SWOT and Johari window, Elements of motivation
Techniques and strategies for self motivation, Motivation checklist and Goal setting based on principle of SMART, Self motivation and life, Importance of self-esteem and enhancement of self-esteem

2 Unit-II

Power of positive thinking:

Nurturing creativity, decision-making and problem solving, Traits of positive thinkers and high achievers, Goals and techniques for positive thinking
Enhancement of concentration through positive thinking, Practicing a positive life style.

Public Speaking Skills:

Importance of public speaking, Voice Modulation, Audience Analysis
Speaking with confidence, Body Language

3 Unit-III

Interpersonal Skills:

Concept of team in work situation, promotion of team spirit, characteristics of team player., Awareness of one's own leadership style and performance.
Nurturing leadership qualities., Emotional intelligence and leadership effectiveness- self awareness, self management, self motivation, empathy and social skills, Negotiation skills- preparation and planning, definition of ground rules, clarification and justification, bargaining and problem solving, closure and implementation

Etiquette; Telephone and Mail

Telephone Etiquette; The usage of proper language, content, tone etc.

Email Etiquettes: right usage of grammar, right style layout and other policies

PRACTICAL TRAINING

The course would include the following practical exercises:.

1. Ice- breaking. Brainstorming and simulation exercises.
2. Thought stopping. Memory and study skills training
3. Role- play, Social skills workshop
4. Transactional Analysis

REFERENCES

1. Mile, D.J (2004). Power of positive thinking. Delhi: Rohan Book Company.
2. Pravesh Kumar (2005). All about self- Motivation. New Delhi: Goodwill Publishing House.
3. Dudley, G.A. (2004). Double your learning power. Delhi: Konark Press. Thomas Publishing Group Ltd.
4. Lorayne, H. (2004). How to develop a super power memory. Delhi: Konark Press. Thomas Publishing Group Ltd.
5. Hurlock, E.B (2006). Personality Development, 28th Reprint. New Delhi: Tata McGraw Hill.
6. Swaminathan. V.D &Kaliappan. K.V(2001). Psychology for Effective Living. Chennai.The Madras Psychology Society.
7. Robbins, S.B.(2005). Organizational Behavior. New Delhi: Prentice Hall of India.
8. Smith, B (2004). Body Language. Delhi: Rohan Book Company.
9. Hurlock, E.B (2006). Personality Development, 28th Reprint. New Delhi: Tata Mcgraw Hill.

1 Introduction and basic concepts of Statistics

- Definition of Statistics, Scope and importance of Statistics.
- Primary and Secondary data, Types of data : qualitative, quantitative,
- discrete, continuous, cross-section, time series, failure, industrial, directional data.
- Graphical presentation: Histogram, frequency polygon, frequency
- Curves Diagrammatic presentation: Bar diagrams, Pie diagram, scatter diagram.
- Classification of data: Discrete and continuous frequency
- distributions, inclusive and exclusive methods of classification,
- relative and cumulative frequency distributions.

2 Measures of Central Tendency

- Concept of central tendency. For group and Ungroup data
- Arithmetic mean (A.M.) simple and weighted Merits and demerits of
- A.M., Mode: Computation for frequency and non-frequency data.
- Computation of mode, Merits and demerits of mode. Median:
- Computation for frequency and non-frequency data, computation. Merits & demerits of median.
- Geometric mean (G.M.) computation for G M , Merits demerits and
- applications of G.M. Harmonic Mean (H M) computation for
- frequency, non-frequency data, merits, demerits.

3 Measures of Dispersions

- Dispersion and measures of Dispersion ,
- Range (definitions and problems) Quartile Deviation (definitions and problems) Mean Deviation (definitions and problems) Standard Deviation (definitions and problems) Variance, different formulae for calculating Variance.

Books:

1. Fundamental of Mathematical Statistics By S.C.Gupta and V.K. Kapoor

Course: B.Sc.(I.T.)

Semester : III

Topic: Practical Based on C++

Paper No.: IT307P (A)

Minimum 10 Practicals to be performed as per the guidelines of teaching Faculty depending upon all theory units of concerned subject.

Course: B.Sc.(I.T.)

Semester : III

Topic: Practical Based on Database Management System

Paper No.: IT307P(B)

- 1) Design five schemas for any organization like: College, school, hospital, travel agency, company, bank etc.
- 2) Normalize the above five selected schemas as per 1NF,2NF and 3NF
- 3) Draw E-R Diagram for the same.
- 4) Solve atleast ten Relational Algebraic Queries

Course: B.Sc.(I.T.)

Semester : III

Topic: Practical Based on Android-I

Paper No.: IT308P(A)

Minimum 10 Practicals to be performed as per the guidelines of teaching Faculty depending upon all theory units of concerned subject.

Course: B.Sc.(I.T.)

Semester : III

Topic: Practical based on I.T.Tools-III

Paper No.: IT308P(B)

Minimum 10 Practicals to be performed as per the guidelines of teaching Faculty depending upon all theory units of concerned subject.

B.Sc.(Information Technology)
Semester -IV

1 Unit – I: Structured Query Language

- DDL Statements to Create and Manage Tables using Create & Alter
- Manipulating Data using Insert, Update & Delete Statement
- Retrieving Data Using SQL Select, Restricting and Sorting Data, Using Single-Row functions, Conversion Functions and Conditional Expressions
- Aggregated Data Using Group Function, Displaying data from Multiple tables, Sub queries, Set Operators

2 Unit – II:Data Storage

- Overview of Physical Storage Media
- Magnetic Disk
- RAID
- Tertiary Storage
- Storage Access

Database System Architecture

- Centralized and Client-Server Architecture
- Server System Architecture
- Parallel System

3 Unit – III:Transaction Processing

- Transaction Concept
- Transaction State
- Implementation of Atomicity and durability
- Concurrent Execution

Concurrency Control Techniques

- Lock-Based Protocol
- Timestamp-Based Protocol
- Deadlock Handling

Books:

- 1) Database System Concepts (Sixth Edition) AviSilberschatz, Henry F. Korth,S. Sudarshan
- 2) An Introduction to Database Systems byBipin C. Desai
- 3) Easy Oracle SQL: Get Started Fast Writing SQL Reports with SQL*Plus By John Garmany
- 4) Mastering Oracle SQL By Sanjay Mishra, Alan Beaulieu

Course: B.Sc.(I.T.)

Semester : IV

Topic: Advanced Android Application Development

Paper No.: IT402-T

Unit I:Android SDK Features

Access to Hardware including Camera, GPS, and Accelerometer, Native Google Maps, Geocoding, and Location-Based Services, Background Services, SQLite Database for Data Storage and Retrieval, Shared Data and Interapplication Communication, P2P Services with Google Talk, Extensive Media Support and 2D/3D Graphics, Optimized Memory and Process Management, The Dalvik Virtual Machine, Advanced Android Libraries.

Android Development Tools

Types of Android Applications, Hardware-Imposed Design Considerations, Users' Environment, The Android Emulator, Dalvik Debug Monitor Service (DDMS), The Android Debug Bridge (ADB).

Unit II:Applications and Activities:

Application Manifest, Manifest Editor, Android Application Life Cycle, Understanding Application Priority and Process States, Externalizing Resources, Fundamental Android UI Design: The Android Widget Toolbox, Layouts, Compound Controls, Custom Widgets and Controls, Android Menu System, Activity Menu, Intents, Broadcast Receivers, Adapters, and the Internet: Intents to Launch Activities, Intent Filters to Service Implicit Intents, Intent Filters for Plug-ins and Extensibility, Intents to Broadcast Events, Android-Supplied Adapters, Internet Resource.

Data Storage, Retrieval, and Sharing

Creating and Saving Preferences,Retrieving Shared Preferences, Saving the Activity State, File Management Tools, Databases in Android: SQLite, Cursors and Content Values, Content Providers.

Maps, Geocoding, and Location-Based Services: Location Providers, Geocoder, Map-Based Activities.

Unit III: Advanced Development in Android:

Controlling Services, Threads, Customizing Toasts, Toasts in Worker Threads, Notification Manager, Triggering Notifications.

Peer-to-Peer Communication: Android Instant Messaging, Sending&Listening, SMS

Accessing Android Hardware: Media APIs, Controlling Camera Settings, Sensor Manager, Accelerometer and Compass, Android Telephony, Bluetooth, Managing Network and Wi-Fi Connections.

Advanced Android Development: Paranoid Android, AIDL to Support IPC for Services, Internet Services, Rich User Interfaces.

Books and References:

- 1) Professional Android 4 Application Development :Retomeier, Wrox
publication.Link:http://priteshpatel.co.in/Android/Doc/professional_android_application_development.pdf
- 2) Android Tutorial, Simply Easy Learning by tutorialspoint.com.
Link:http://www.tutorialspoint.com/android/android_tutorial.pdf
- 3) Android Apps for Absolute beginners : Wallace Jadson, Apress.
- 4) The Complete Android Guide: Kevin Purdy
- 5) Javapoint Tutorial : <http://www.javapoint.com/android-tutorial>

1 Basics of ASP Programming

- Why Asp, Development Environment
- ASP: An Overview of ASP Object, ADO Object, ASP Components, Relational Database and other Data Sources, Client-Server or Tired Application
- Virtual Directories, Web site as Communication Channel, Steps to design a web site Application

2 ASP and Web –Programming Basics

- Web Site Coding Languages: Static Web Page and Dynamic Application
- VBScript Features : Declaration, Constant , literals, control flow structures, Data Type conversions,
- ASP and Databases
- Proper coding Techniques

3 Built In & ASP Objects

- Application Object
- Request Object
- Response Object: cookies, properties and method of Response Object
- Session Object
- Global.asa file

4 HTML FORM &Controls

- InputBox, &Msgbox
- Text Boxes , Text Area, Radio box , Check Boxes
- Select List
- Validating Form Data

5 COOKIES

- Working with cookies
- Application of Cookies
- Drawbacks of using cookies
- Using cookies in ASP Applications

6 Working with Databases

- Creating connection with OLE db and ODBC
- Connecting to Access Database
- Connection object: Executing SQL Statement (insert, update, delete & Select)
- RecordSet : Retrieving a recordset , properties

Books:

1. ASP 3.0 A beginners Guide By Dave Mercer , Tata McGraw Hill
2. Practical ASP By Ivan Bayross , BPB Publication.

1 Unit-I: Object oriented paradigm

Basic concepts of Object oriented programming: class & object, data abstraction and encapsulation, inheritance, polymorphism, dynamic binding, message communication. Benefits and applications of OOP. History and features of Java. Java Vs. C++. Java and Internet, Java and www. Java environment. Structure of java program, symbolic constants. Data types.

Arrays, Classes and Objects

Declaration and initialization, one and multidimensional arrays Defining a class, adding variables and methods, creating objects, static fields and static methods. Method overloading, Constructors: types and multiple constructors in class. Command line arguments.

2 Unit-II: Inheritance

Super and sub class, defining a subclass. Single inheritance, multilevel inheritance and hierarchical inheritance. Subclass constructors. Super keyword, Visibility controls, Method overriding, Dynamic method dispatch, Abstract methods and class.

Interfaces, String and Vector Class

Defining interfaces, implementing interfaces, extending interfaces, accessing interface variables. String class and its methods, Vectors

3 Unit-III: Packages

Introduction, Java API packages, Naming conventions, creating and accessing user defined package, using a package, adding a class to a package, importing classes from package.

Exception handling and Multithreading

Exceptions, syntax of exception handling code, multiple catch statements, throw: throwing own exceptions, throws and finally Introduction to multithreading, creating threads by extending the Thread class and by implementing Runnable interface, implementing the run() method, Life cycle of a thread, Thread methods and thread priority.

Books:

1. Programming with JAVA: E. Balagurusamy, Tata Mc-Graw Publishing Company Ltd.
2. The Complete Reference J2SE: Herbert Schildt, Tata Mc-GrawPub. Comp.Ltd.
3. Core Java-2 Vol-I &Vol-II - Cray S. Horstmann, Gray Corneel; Pearson Education, Low Price edition

1 Unit –I

Arithmetical Ability- I

Numbers- types of numbers, face value and place value, operations on numbers, decimal fractions, problem on numbers, average, square roots and cube roots, problems on numbers, percentage, area, surds and indices, profit and loss, True discounts, Banker's Discounts

2 Unit - II

Arithmetical Ability- II

Ratio and Proportion, Partnership, Time and Work, Time and Distance, Problems on trains, simple interest, compound interest, logarithms, volume and surface areas, Permutations and Combinations, Probability, Odd man Out and series

3 Unit – III

Data Interpretation

Tabulation, Bar graphs, Pie Charts, Line Graphs

Logical Reasoning -Clocks, calendars, binary logic, seating arrangement, blood relations, logical sequence, assumption, premise, conclusion, linear and matrix arrangement

Reference Books:

- 1) Quantitative Aptitude- R S Agrawal
- 2) Quantitative Aptitude for Competitive Examiners- By AbhijitGuhil
- 3) A Modern Approach to Verbal Reasoning - By R S Agrawal
- 4) Logical and analytical reasoning - By R Gupta
- 5) Quantitative Aptitude - By S N Jha

1 Unit – I

Introduction to Software Project Management:

Software project versus other types of project. Problems, Requirement specifications. Introduction to step wise project planning Select identify scope and objectives - identify project infrastructure - Analyse project characteristics - products and activities.

2 Unit - II

Project evaluation

Introduction to Strategic assessment – technical assessment - cost benefit analysis - cash flow forecasting – cost benefit evaluation techniques - risk evaluation.

3 Unit – III

Selection of an appropriate project approach –

Choosing technologies - technical plan contents list - choice of process models - structured methods - rapid application development -waterfall model - spiral model - software prototyping - ways of categorizing prototypes - tools - incremental delivery.

Books for Study:

1. Software project management : Bob Hughes and Mike Cotterell - - Fourth edition - McGraw Hill

2. Software Project Management : Walker Royce - - Addison Wesley.

Course: B.Sc.(I.T.)

Semester : IV

Topic: Practical Based on Java Programming

Paper No.: IT407P (A)

Minimum 10 Practicals to be performed as per the guidelines of teaching Faculty depending upon all theory units of concerned subject.

Course: B.Sc.(I.T.)

Semester : IV

Topic: Practical Based on Adv. DBMS

Paper No.: IT407P (B)

- 1) Using SQL commands to create the tables and views of five schemas for any organization like: College, school, hospital, travel agency, company, bank etc.
- 2) Perform Data Definition Language Commands
- 3) Perform Data Manipulation Language Commands
- 4) Perform Minimum 10 Queries on each of the above five schemas.

Course: B.Sc.(I.T.)

Semester : IV

Topic: Practical Based on Adv. Android

Paper No.: IT408P(A)

Minimum 10 Practicals to be performed as per the guidelines of teaching Faculty depending upon all theory units of concerned subject.

Course: B.Sc.(I.T.)

Semester : IV

Topic: Mini Project Using Web Technology

Paper No.: IT408P(B)

Note:A mini project having minimum 5 forms, using Web Technology as a front end and any DBMS as backend. Team size maximum 2 students.

Minimum contents of Project Report

1. Introduction
2. Problem definition.
3. System Requirement Specification
 - 3.1. User Interview
 - 3.2. Current System flow diagram
 - 3.3. Proposed System.
4. E-R Diagram
5. DFD

6. Sample Screens
7. Conclusion