# JAI HIND COLLEGE AUTONOMOUS



# Syllabus for SYBVOC

# Course : Software Development

# Semester : IV

*Credit Based Semester & Grading System*

*With effect from Academic Year 2018-19*

# List of Courses

**Course: Software Development**                    **Semester: IV**

| SR. NO. | COURSE CODE | COURSE TITLE | NO. OF LECTURES / WEEK | NO. OF CREDITS |
|---------|-------------|--------------|------------------------|----------------|
| **SYBVOC** | | | | |
| 1 | SBSD401 | Report Writing | 3 | 3 |
| 2 | SBSD402 | Digital Marketing | 3 | 3 |
| 3 | SBSD403 | Green Computing | 3 | 3 |
| 4 | SBSD404 | Human Resource Management | 3 | 3 |
| Skill Component | | | | |
| 5 | SBSD405 | Android App Development | 3 | 3 |
| 6 | SBSD406 | Asp.net with C# | 3 | 3 |
| 7 | SBSD407 | Advance SQL with Oracle | 3 | 3 |
| 8 | SBSD408 | Cryptography and Network Security | 3 | 3 |
| 9 | SBSD405PR | Android App Development Practical | 3 | 1.5 |
| 10 | SBSD406PR | Asp.net with C# Practical | 3 | 1.5 |
| 11 | SBSD407PR | Advance SQL with Oracle Practical | 3 | 1.5 |
| 12 | SBSD408PR | Cryptography and Network Security Practical | 3 | 1.5 |

## Semester IV – Theory

| Course: SBSD401 | Course Title:Report Writing(Credits :03Lectures/Week:03) | |
|---|---|---|
| | **Objectives:** <br> **The scope and style of reports varies widely. It depends on three key factors: the report's intended audience, the report's purpose and the type of information to be communicated; for example, technical reports communicate technical information, so the degree of technicality in the report will depend on the reader's familiarity and understanding of technical concepts.** <br> **Outcomes:** <br> 1. **identify key reference documents to help guide the structure and style of your report or proposal;** <br> 2. **describe the connection between proposals and reports;** <br> 3. **plan and organize a report or proposal by clearly stating your purpose as the writer, assessing the reader's identity and needs, and formulating the** <br> 4. **main message of your document;** <br> 5. **develop an outline that arranges your main ideas in support of your purpose and main message;** <br> 6. **summarize the main ideas of your report or proposal for use in briefing notes or speech notes so that others can convey your main message in** <br> 7. **other contexts;** | |
| **Unit I** | REPORT WRITING: Writing an Effective Report: Stages of Writing, Composing Business Messages, Style and Tone; Five Ws and one H of Report Writing, Planning and Types of Reports, Divisions, Numbering and use of Visual Aids, creativity in written communication, use of picture, diagram in written communication. | **15L** |
| **Unit II** | ORAL COMMUNICATION: Fundamentals of Oral Communication: Introduction, Barriers and Gateways in Communication, Listening, Feedback, Telephonic Messages, Public Speaking, and Presentation of Reports, Power point presentation, body language, non-verbal, facial expressions, communication and emotional intelligence, creativity in oral communication, -4- persuasive communication, communication through organizing various events like conferences, committee meeting, press meets, seminars, fests and the like. | **15L** |
| **Unit III** | BUSINESS COMMUNICATION: Writing Commercial Letters: Business Letter Format, Types of Letter – Routine Business Letters, Sales Letters, Resume and Job Applications, Business Memos, E- Mail Messages, Proposals, Technical Articles, Telegrams, Telex Message, Facsimiles, Electronic Mail, Handling a Mail, Maintaining a Diary, Legal Aspects of Business Communication, Negotiation Skills. | **15L** |
| **Unit-IV** | ROUTINE CORRESPONDENCE: circulars, drafting notices, handling complaints, evaluating interview performance, articles, formal invitations, proforma for performance appraisal, letters of appointment, captions for advertising, company notice related shares, dividends, MoA, AoA, Annual Reports, Minutes of Meeting, action taken report on previous resolution. | **15L** |

**Textbook:**
1. Scot Ober, Contemporary Business Communication, Biztantra
2. Bovee, Thill and Schatzman, Business Communication today, Pearson
3. NageshwarRao and Rajendra Das, Business Skills, HPH
4. Mary ellenGuffy, Business Communication, Thomson
5. M Ashraf Rizvi, Effective Technical Communication, TMH
6. Meenakshi Raman and Sangeeta Sharma, Technical Communication, Oxford
7. Micheal Osborn and Suzanne Osborn, Public Speaking, Biztantra
8. John Seely, Oxford Writing and Speaking, Oxford
9. ParagDiwan, Business Communication,

| Course: SBSD402 | Course Title: Digital Marketing(Credits :03  Lectures/Week:03) | |
|---|---|---|
| | **Objectives:** The primary **objective** of **digital marketing** is to provide online presence to your business through website and social media. You can spread awareness about your brand and provide support to your customer by handling their grievance and queries, which ultimately leads to sales, customer acquisition & satisfaction.<br><br>**Outcomes:** The main goals for **digital marketing** are: Reach your audience (be found!) Engage your audience (provide useful content that helps your prospects solve a problem) Obtain a measurable **outcome** (get a lead in the form of an email sign-up or better yet a sales enquiry) | |
| **Unit I** | Social media marketing-Types of social media and how it influences customers-Facebook-creating facebookpage,creating FAN page for Business Marketing, You Tube Ads, Twitter, Linked in, slide share, Search engine optimization-rank webpage on top of search, ORM, Google webmaster tool, .Google Analytics-Analyse, measure and improve performance of online campaigns | **15L** |
| **Unit II** | Freelancer affiliate Marketing, Google Adwords, Create advertising campaigns on google<br>Email marketing, Mobile marketing, Online reputation management, Google webmaster Tools<br>Infographics Content marketing, .DigitalMarketing strategy, E commerce Business marketing-Top E – Commerce Websites around the world E – Commerce Scenario in India How to do SEO of an E – Commerce Website Why you need a solid E – Commerce marketing strategy Formulating right e – commerce marketing strategy Using affiliate marketing to promote your e – commerce business , Hashtag Viral Market Webinar Marketing, Whatsapp marketing, Creating a blog, Instagram Marketing | **15L** |
| **Unit III** | Marketing analysis (annual reports, news articles, government resources)<br>Target Audience analysis (Simmons Market Research Bureau, Mediamark Research)<br>Competitive analysis (Bureau of Advertising Research, Leading National Advertisers)<br>Media planning ,The function of media planning in advertising | **15L** |
| **Unit-IV** | Role of media planner, Challenges in media planning ,Media planning process<br>Deciding the ideal media mix and communications mix. | **15L** |

**Textbook:**
1. Jack Z Sissors and Jim Surmanek, Advertising Media Planning-crain books 1976
2. James R Adams, Media Planning-Business books 1977
3. Advanced M.P.-John R Rossister, Kluoer Academic publications 1998
4. Advertising M.P. , Jack Z Sissors, McGraw Hill 6th Edition

| Course: SBSD403 | Course Title:Green Computing(Credits :03 Lectures/Week:03) | |
|---|---|---|
| | **Objectives:** The objective of this course is to provide graduate students with an understanding of the role of Green Computing and there impact on the global carbon footprint, This includes how to estimate the carbon footprint of the Green Computing operations of an organization and access ways to reduce the carbon footprint by changes to policies for procurement of Green Computing, changes to Green Computing operations and revising business processes.<br><br>**Outcomes:** This *course* introduces students to the exciting area of "*Green Computing*" aiming to help students acquire the knowledge and skills needed to do research in this space.<br>The second track is "Applying *Computing* towards Sustainability", covering topics that leverage *computing* to reduce the energy footprint of our society. | |
| Unit I | What is environment? Introduction to Environment.Key elements of a safety and Health Management System- Policy & commitment, Initial Safety and health Management System, Review safety and Health policy- Developing a workplace Safety and Health Policy. Safety Consultation. Fire, change of state and latent heat, thermal expansion of solids, liquids and gases.Transmission of heat, combustion, Fire tetrahedron, and combustible solid, liquids and gases.<br>Classification of Fire and different fire extinguishing methods, portable fire extinguishers. | 15L |
| Unit II | FUNDAMENTALS<br>**Green IT Fundamentals:** Business, IT, and the Environment – Green computing: carbon footprint, scoop on power – Green IT Strategies: Drivers, Dimensions, and Goals – Environmentally **Responsible Business**: Policies, Practices, and Metrics.<br>**GREEN ASSETS AND MODELING**<br>**Green Assets**: Buildings, Networks, and Devices – Green Business Process<br>Management: Modeling, Optimization, and Collaboration – Green Enterprise **Architecture** :Environmental Intelligence – Green Supply Chains – Green Information Systems: Design andDevelopment Models. | 15L |
| Unit III | **GREEN COMPLIANCE**<br>Socio-cultural aspects of Green IT – Green Enterprise Transformation Roadmap – Green<br>Compliance: Protocols, Standards, and Audits – Emergent Carbon Issues: Technologies and<br>Future.<br>**Green Hardware and Software:**<br>Green Hardware, Introduction, Life Cycle of a Device or Hardware, Reuse,<br>Recycle and Dispose, Green Software, IntroductionEnergy-Saving Software Techniques, Changing the way we work, Going Paperless. | 15L |
| Unit-IV | **Green Data Center**: Data Centre IT Infrastructure, Data Centre Facility Infrastructure: Implications for Energy Efficiency, IT Infrastructure Management, Green Data Centre Metrics,.<br>**Green Data Storage**:Introduction, Storage Media Power Characteristics, Energy Management Techniques for Hard Disks, System-Level Energy | 15L |

|  | Management |  |
|---|---|---|

**Textbook:**

1. Mark G. O'Neill, GREEN IT FOR SUSTAINABLE BUSINESS PRACTICE, An ISEB Foundation Guide.
2. Jason Harris, Green Computing and Green IT Best Practices.

| Course: SBSD404 | Course Title:Human Resource Management(Credits :04  Lectures/Week:03) | |
|---|---|---|
| | **Objectives:**<br>  &#10148; **Effective** Utilization Of Resources. ...<br>  &#10148; **Organizational Structure**. ...<br>  &#10148; Development Of Human Resources. ...<br>  &#10148; Respect For Human Beings. ...<br>  &#10148; **Goal** Harmony.<br><br>**Outcomes:**<br>Human resource management (HRM) is a term which is now widely used but very loosely defined. In this paper it is argued that if the concept is to have any social scientific value, it should be defined in such a way as to differentiate it from traditional personnel management and to allow the development of testable hypotheses about its impact. | |
| Unit 1. | **Overview of HRM Field** The human relations movement, human capital, human resource department structure, job attitudes, ethics.<br>**Organizational Theories & Human Resources** Taylor's principles of scientific management, Fayol's staff management theories, the two types of managers | **15L** |
| Unit 2 | Job Analysis and Design- Job enrichment and enlargement, job rotation, job specifications and descriptions, job evaluation methods. Staffing in Organizations -The hiring process, staff selection methods, job bidding, employee turnover and absenteeism, employee termination. Employee training programs | **15L** |
| Unit 3 | Performance Appraisals -Administrative and developmental uses of performance appraisals, common appraisal methods, management by objective. Types of compensation systems, compensation equity, mandatory and voluntary benefits, incentives | **15L** |
| Unit 4 | Labor Relations -The National Labor Relations Board, collective bargaining and unionizing processes, bargaining strategies, Executive Order 10988 Current Issues and Trends in HRM -Affirmative action, cultural and age diversity, gender diversity, workplace violence, alternative work arrangements | **15L** |
| **Textbook:**<br>1. | | |

| Course: SBSD405 | Course Title:Android App Development(Credits :03 Lectures/Week:03) | |
|---|---|---|
| | **Objectives:**<br>➢ To provide the comprehensive insight into developing applications running on smart mobile devices and demonstrate programming skills for managing task on mobile.<br>➢ To provide systematic approach for studying definition, methods and its applications for Mobile-App development.<br>**Outcomes:**<br>➢ Understand the requirements of Mobile programming environment.<br>➢ Learn about basic methods, tools and techniques for developing Apps<br>➢ Explore and practice App development on Android Platform<br>➢ Develop working prototypes of working systems for various uses in daily lives | |
| UNIT I | **The Android Platform:** Introduction to the Android platform, Architecture, Android components, Development Tools – SDK, ADB, Gradle, etc. Installing Android Studio IDE, and developing first app<br><br>**Activities and Lifecycle, Fragments and Intents -** Activities and Intents, Activity Lifecycle and Saving State, Using Intents-exploring intent objects, Fragments, Intent Object to Invoke Built-in Application<br><br>**UI Design:** Android Layout Managers - LinearLayout, RelativeLayout, ScrollView, TableLayout, FrameLayout, Action Bar | **15L** |
| UNIT II | **Working with Views-** TextView, EditText View, Button View, RadioButton View, CheckBox View, ImageButton View, ToggleButton View, RatingBar View. Event Handling<br><br>**Data binding in applications** - Introduction to data binding in Android, What is an Adapter?, Adapter Views - ListView Class, Spinner, Gallery View, AutoTextCompleteView, GridView<br><br>**Displaying Pictures and Menus with Views** - Working with Image Views, Designing Context Menu for Image View, Notifying the User<br><br>**Data Persistence** - The Data Storage Options, Internal Storage, External Storage, Using the SQLite Database - CRUD, Working with Content Providers | **15L** |
| UNIT III | **Networking in Android:** Accessing the network, Permission to access the network, Checking Network Availability, Sending Email, consuming web services using HTTP<br><br>**Location-Based Services -** Displaying Maps, Getting Location Data, monitoring a Location, Google Maps API, Using the Geocoder.<br><br>**Using Multimedia** — Audio, Video, and the Camera Playing audio and video, recording audio and video, Using Camera for Taking Pictures, Using Media Player | **15L** |

|         | **Telephony and SMS:** Handling Telephony, Handling SMS, Sending SMS Using Intent | |
|---------|-----------------------------------------------------------------------------------|------|
| **UNIT IV** | **Working with Bluetooth and Wi-Fi -** BluetoothAdapter and Managing Wi-Fi connectivity using WifiManager | **15L** |
| | **Graphics and Animation:** Working with Graphics, Using the Drawable Object, Using the ShapeDrawable Object, Concept of Hardware Acceleration, Working with Animations | |
| | **Advanced Development** - Cloud to Device Messaging using Google Firebase Cloud Messaging and AdMob, Publishing the App, Best Practices for Performance | |

**Textbook:**

1. Professional Android™ 4 Application Development, Reto Meier, John Wiley & Sons, Inc. 2012.
2. Android Application Development, Black Book, Pradeep Kothari, Kogent Learning Solutions, DreamTech Press
3. "Beginning Android 4 Application Development", Wei-Meng Lee, March 2012, WROX.
4. Google Android Developers - https://developer.android.com/index.html

| Course: SBSD406 | Course Title: Asp. Net with C#(Credits :03  Lectures/Week:03) | |
|---|---|---|
| | **Objectives:**<br>➢ Understand the .NET framework<br>➢ Develop a proficiency in the C# programming language<br>➢ Proficiently develop ASP.NET web applications using C#<br>➢ Use ADO.NET for data persistence in a web application<br>➢ To develop web sites and applications with *XML AND AJAX*<br><br>**Outcomes:**<br>➢ Create a Web form with server controls.<br>➢ Separate page code from content by using code-behind pages, page controls, and components.<br>➢ Display dynamic data from a data source by using Microsoft ADO.NET and data binding.<br>➢ Debug ASP.NET pages by using trace. | |
| Unit I | Overview of .NET Framework, Objectives, Main components of .NET Framework and their overview, Types of Applications<br>.NET Framework Architecture– CLR(Goal of CLR, Services/Features, Benefits, Managed Execution Process, Automatic memory Management),<br>CTS(CTS Overview, Type Definitions, Type members, Different types of data such as class, delegates, pointes, arrays, interfaces), Meta Data, Structure of Metadata & Self Describing Components, Cross Language Interoperability & CLS, Assemblies(Assembly overview, Benefits, Contents, Types)<br>Creating Web Sites :- Working with Web Forms, Working with CSS in Visual Web Developer, ASP.NET Server Controls, Standard Controls, HTML Controls, Understanding ASP.NET State Engine. | 15L |
| Unit II | Introduction to Programming:- Data Types and Variables, Statements, Methods: Functions and Subroutines.<br>Consistent Page Layout with Master Pages, Using a Centralized Base Page.<br>Structured Exception Handling : try, catch, finally blocks, throwing exceptions, Err object, Using masked Textboxes<br>Navigation Controls- Architecture of the Navigation Controls, Menu Control, TreeView Control<br>Validation Controls – Validations & Validator controls, | 15L |
| Unit III | ADO.NET: Data Provider Model, Direct Data Access - Creating a Connection, Select Command, DataReader, Disconnected Data Access<br>Data Binding: Introduction, Single-Value Data Binding, Repeated-Value Data Binding, Data Source Controls – SqlDataSource, Other Data Controls, Working Together with Data Source and Data-bound Controls<br>User Controls-Creating User Controls, Adding User Controls to a Content Page or Master Page | 15L |
| Unit IV | LINQ:  Operators, implementations, LINQ to objects,XML,ADO.NET, Query Syntax. ASP.NET<br>Ajax: Introducing AJAX, Working of AJAX, Using ASP.NET AJAX server controls.<br>JQuery: Introduction to JQuery, JQuery UI Library, Working of JQuery | 15L |

| | Web Service:What is web service, ASP.NET Web services, Creating a simple web service, Consuming Web service | |

**Textbook:**
1. The Complete Reference ASP .NET, MacDonald, Tata McGraw Hill
2. Beginning ASP.NET 4 in C# and VB ImarSpanajaars, WROX

| Course: SBSD407 | Course Title: Advance SQL with Oracle (Credits :03  Lectures/Week:03) | |
|---|---|---|
| | **Objectives:**<br>**Describe the fundamentals of the PL/SQL**<br>**programming language**<br>• **Write and execute PL/SQL programs in SQL\*Plus**<br>• **Execute PL/SQL data type conversion functions**<br>• **Display output through PL/SQL programs**<br>• **Manipulate character strings in PL/SQL programs**<br>• **Debug PL/SQL programs**<br><br>**Outcomes:**<br>1.　**Enhance the knowledge and understanding of Database analysis and design.**<br>2.　**Enhance the knowledge of the processes of Database Development and Administration using SQL and PL/SQL.**<br>3.　**Enhance Programming and Software Engineering skills and techniques using SQL and PL/SQL.**<br>4.　**Preparation of background materials and documentation needed for Technical Support using SQL and PL/SQL.**<br>5.　**Use the Relational model and how it is supported by SQL and PL/SQL.** | |
| Unit I | **Fundamentals** : Introduction to PL/SQL , Benefits of PL/SQL , Creating PL/SQL Blocks<br>**DDL and data types** : Using Variables in PL/SQL, Recognizing PL/SQL Lexical Units, Recognizing Data Types, Using Scalar Data Types , Writing PL/SQL Executable Statements ,Nested Blocks and Variable Scope , Good Programming Practices<br>**DML**: Review of SQL DML, Retrieving Data in PL/SQL, Manipulating Data in PL/SQL, Using Transaction Control Statements, aggregate queries<br>**Control structure:** Conditional Control: IF Statements, Conditional Control: CASE Statements ,Iterative Control: Basic Loops , Iterative Control: WHILE and FOR Loops , Iterative Control: Nested Loops | **15L** |
| Unit II | **Cursors and Parameters** Introduction to Explicit Cursors , Using Explicit Cursor Attributes, Cursor FOR Loops , Cursors with Parameters ,Using Cursors for UPDATE , Using Multiple Cursors<br>**Exception Handling** Handling Exceptions, Trapping Oracle Server Exceptions , Trapping User-Defined Exceptions , Recognizing the Scope of Exceptions<br>**Using and Managing Procedures** Creating Procedures, Using Parameters in Procedures, Passing Parameters | **15L** |
| Unit III | **Using and Managing Functions** Creating Functions ,Using Functions in SQL Statements , Review of the Data Dictionary , Managing Procedures and Functions , Review of Object Privileges<br>**Using and Managing Packages** Creating Packages , Managing Package Concepts , Advanced Package Concepts Getting the Best out of Packages ,l Persistent State of Package Variables , Using Oracle-Supplied Packages | **15L** |
| Unit IV | **Improving PL/SQL Performance** Using Dynamic SQL , Improving PL/SQL Performance Using and Managing Triggers, Introduction To | **15L** |

| | Triggers , Creating DML Triggers Part I, Creating DML Triggers Part II , Creating DDL and Database Event Triggers , Managing Triggers **XML** structure of XML, Document schema, querying and transformation, XML application | |

**Textbook:**
1. *Oracle PL/SQL Programming*, Fifth Edition By Steven Feuerstein, Bill Pribyl
2. *Murach's Oracle SQL and PLSQL* by Joel Murach, Murach and Associates.

| Course: SBSD408 | Course Title:Cryptography and Network Security (Credits :03 Lectures/Week:03) | |
|---|---|---|
| | **Objectives:**<br>➢ To understand the fundamentals of Cryptography<br>➢ To acquire knowledge on standard algorithms used to provide confidentiality, integrity and authenticity.<br>➢ To understand the various key distribution and management schemes.<br>➢ To understand how to deploy encryption techniques to secure data in transit across data networks<br>➢ To design security applications in the field of Information technology<br>**Outcomes:**<br>➢ Provide security of the data over the network.<br>➢ Do research in the emerging areas of cryptography and network security.<br>➢ Implement various networking protocols.<br>➢ Protect any network from the threats in the world | |
| Unit I | **Computer Security :** Introduction, Need for security, Principles of Security, Types of Attacks<br>**Traditional Symmetric Key Ciphers :**,Substitution techniques, Caesar Cipher, Mono-alphabetic Cipher, Polyalphabetic Substitution, Playfair, Hill Cipher, Transposition techniques, Symmetric and Asymmetric Key Cryptography, Key Range and Key Size. | 15 L |
| Unit II | **Advanced Symmetric Key Ciphers:** Data Encryption Standard (DES), InternationalData Encryption (IDEA), Blowfish, Advanced Encryption Standard (AES)<br>**Asymmetric Key Algorithms:** Overview of Asymmetric Key Cryptography,Knapsack Cryptosystem, RSA algorithm, ElGamal algorithm<br>**Digital Signature:** Message Digest, Cryptographic Hash Function criteria, Digital Signature, Digital signature schemes | 15 L |
| Unit III | **Key Management**: Symmetric Key Distribution, Kerberos, Symmetric Key Agreement, Public Key Distribution<br>**Network Security:** Brief Introduction to TCP/IP, Security at Application Layer (E-MAIL, PGP and S/MIME), Security at Transport Layer (SSL and TLS), Security at Network Layer (IPSec). | 15 L |
| Unit IV | **Malicious software and Internet Security:** viruses and related threats, virus countermeasures, denial of service attacks.<br>**Firewall and Intrusion Detection:** Firewalls and their types, DMZ, Limitations of firewalls, Intruders, Intrusion detection (Host based, Networked, Distributed). | 15 L |
| **Textbook:**<br>  1.  Cryptography & Network Security, Behrouz A. Forouzan, 4th Edition, Tata McGraw-Hill<br>  2.  Cryptography and Network Security by Atul Kahate, 3rd Edition, Tata McGrawHill<br>  3.  Network security essentials-applications and standards, William Stallings, Third Edition, Pearson Education | | |

## Semester IV – Practical

| Course:<br>SBSD405PR | Practical Title: Android App Development Practical<br>(Credits : 1.5 Practicals/Week: 01) |
|---|---|
| | 1. Install Android Studio and Run Hello World Program.<br>2. Create an android app that demonstrates Activity Lifecycle and Instance State.<br>3. Create an android app with Interactive User Interface using Layouts.<br>4. Create an android app that demonstrates working with Input Controls, Alerts, and Pickers.<br>5. Create an android app that demonstrates the use of an Options Menu.<br>6. Create an android app that demonstrate Screen Navigation Using the App Bar and Tabs.<br>7. Create an android app to show Notifications<br>8. Develop an application for connecting to the internet and sending email.<br>9. Develop an application demonstrating Internal Storage to store private data on the device memory.<br>10. Create an android app to save user data in a database and use of different queries.<br>11. Develop an application for working with graphics and animation.<br>12. Develop an application for working with device camera.<br>13. Develop an application for working with location based services.<br>14. Develop an application for working with Firebase |

| Course:<br>SBSD406PR | Practical Title: Asp. Net with C#(Credits : 1.5 Practical's/Week: 01) |
|---|---|
| | 1. Simple Programs with C#:<br>2. Object oriented programs with C#<br>3. Programs using different controls.<br>4. Programs using CSS.<br>5. Programs using ASP.NET Server controls.<br>6. Database programs with ASP.NET and ADO.NET<br>7. Programs using Language Integrated query.<br>8. Implement the exercise on AJAX.<br>9. Implement the exercise on JQuery.<br>10. Programs securing web pages. |

| Course: SBSD407PR | Practical Title: Advance SQL with Oracle(Credits : 1.5 Practicals/Week: 0 |
|---|---|
| | 1. Creating anonymous PL/SQL blocks. |
| | 2. DDL and insert values in tables |
| | a. Querying single and multiple tables |
| | b. Creating simple tables and tables with constraints. |
| | 3. Manipulating data (Insert, update and delete) |
| | 4. Conditional statement and control statement |
| | 5. Iterative control |
| | 6. Cursors with parameters to process a number of rows from multiple tables. |
| | 7. Create exception handlers for specific situations. |
| | 8. Function and procedures |
| | a. Creating and invoking functions from SQL statements |
| | b. Creating and invoking stored procedures. |
| | c. Re-create the source code for a procedure and a function. |
| | d. Create procedures that issue DML and query commands. |
| | 9. Working with packages |
| | a. Create package specifications and package bodies. Invoke the constructs in the packages |
| | b. Create a package containing an overloaded function. |
| | 10. Triggers |
| | a. Create statement and row triggers. |
| | b. Create procedures that will be invoked from the triggers. |
| | 11. XML |

| Course: SBSD408PR | Practical Title:Cryptography and Network Security (Credits : 1.5 Practicals/Week: 01) |
|---|---|
| | 1. Implementing Substitution Ciphers<br>a. Caesar Cipher<br>b. Modified Caesar Cipher<br>c. Mono-Alphabetic<br>d. Poly-Alphabetic<br><br>2. Implementing Transposition Ciphers<br>a. Rail fence Techniques<br>b. Simple Columnar<br>c. Multicolumnar<br>d. Vernam Cipher<br><br>3. Implementing Diffie Hellman Key Exchange Algorithm<br><br>4. Implementing DES Algorithm<br><br>5. Implementing IDEA<br><br>6. Implementing AES<br><br>7. Implementing Knapsack Algorithm<br><br>8. Implementing RSA Algorithm<br><br>9. Implementing RC5 Algorithm<br><br>10. Implementing Blowfish Algorithm |

**Evaluation Scheme**

**[A] Evaluation scheme for Theory courses**

**I. Internal Test- 25 Marks**

**II. Semester End Examination (SEE)- 75 Marks**

**[B] Evaluation scheme for Practical courses**

**I. Practical Exam (50 Marks)**

**BASANTSING INSTITUTE OF SCIENCE & J. T. LALVANI COLLEGE OF COMMERCE.
MUMBAI-400020.**

**Class:  Paper-**
**Subject:**                                          **Time**:
**Day & Date:**                                                      **Total Marks :75**

PLEASE READ CAREFULLY THE WARNING PRINTED ON THE ANSWER BOOK IN
CONNECTION WITH THE USE TO UNFAIR MEANS.

General Instructions:-   1. All questions are Compulsory

2. Numbers to the right indicate maximum marks

3. Answers to the sub-questions of the same question must be written together.

4. Each question carries 5 marks.

| **Q1)** | **Answer three of the following questions (Based on Unit 1)** | **(15 marks)** |
|---|---|---|
| 1) | | (5) |
| 2) | | (5) |
| 3) | | (5) |
| 4) | | (5) |
| 5) | | (5) |
| 6) | | (5) |
| | | |
| **Q2)** | **Answer three of the following questions (Based on Unit 2)** | **(15 marks)** |
| 1) | | (5) |
| 2) | | (5) |
| 3) | | (5) |
| 4) | | (5) |
| 5) | | (5) |
| 6) | | (5) |
| | | |
| **Q3)** | **Answer three of the following questions (Based on Unit 3)** | **(15 marks)** |
| 1) | | (5) |
| 2) | | (5) |
| 3) | | (5) |
| 4) | | (5) |
| 5) | | (5) |
| 6) | | (5) |
| | | |
| **Q4)** | **Answer three of the following questions (Based on Unit 4)** | **(15 marks)** |
| 1) | | (5) |
| 2) | | (5) |
| 3) | | (5) |
| 4) | | (5) |

| 5) | | (5) |
|---|---|---|
| 6) | | (5) |
| | | |
| **Q5)** | **Answer <u>three</u> of the following questions (Based on Unit 1,2,3, 4)** | **(15 marks)** |
| 1) | | (5) |
| 2) | | (5) |
| 3) | | (5) |
| 4) | | (5) |
| 5) | | (5) |
| 6) | | (5) |
| | | |

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**JAI HIND COLLEGE**

**BASANTSING INSTITUTE OF SCIENCE & J. T. LALVANI COLLEGE OF COMMERCE.**

**MUMBAI 400020.**

</div>

**CLASS:**                                      **TIME:**

**SUBJECT:**                               **DATE:**

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**SEMESTER III  PRACTICAL EXAMINATION**

</div>

1) Practical Examination – 50 Marks

| 1) | a) Questions on Practical programs | (20 marks) |
|---|---|---|
| | b) Questions on Practical programs | (20 marks) |
| | c) Journal | (5 marks) |
| | d) Viva | (5 marks) |