

## **II M.Sc(IT) – III SEMESTER**

### **ADVANCED JAVA PROGRAMMING**

#### **UNIT – I**

Introduction to JDBC, JDBC Vs ODBC, JDBC Driver models, Java.Sql package, Steps for Using Jdbc, Executing DDL & DML components – Joings & Transaactions, cursors & Batch Update.

#### **UNIT – II**

Inside URLs, URL Encoding, Web Servers, CGI, HTTP – Properties of Servlets - Servlets Vs CGI, Servlet life cycle – Servlet API – Running Servlets – Thread safe Servlets – cookies – Stable Session Management.

#### **UNIT – III**

JSP Overview - The componets of a JSP – Javabeans & JSP Concepts – JDBC & JSP Concepts Using the JSP's implicit Objects – JSP & HTML FORMS - JSP Communication with Servlets

#### **UNIT – IV**

Three tier Architectures – EJB Architecture – Writing Simple Hello EJB – EJB Session Beans.

#### **UNIT – V**

EJB Entity Beans - EJB Clients – Deployment – Tips, Tricks and Traps for Building Distributed and other Systems.

#### **Books for Study**

1. Advance Java Programming - Shiran
2. Inside Servlets – Dutch R. Callway Addison Wesley.
3. Pure JSP Java Server Pages A Code
4. Entity Java Beans – Valeskey

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**ASP.NET and Its Applications**

**UNIT I**

Introduction to ASP.Net - Language Support - **ASP.NET Web Forms** - Introducing Web Forms-Working with Server Controls - Applying Styles to Controls - Server Control Form Validation -Web Forms User Controls - Data Binding Server Controls - Server-Side Data Access - Data Access and Customization - Working with Business Objects - Authoring Custom Controls - Web Forms Controls Reference - Web Forms Syntax Reference.

**UNIT II**

**ASP.NET Web Services** - Introducing Web Services - Writing a Simple Web Service - Web Service Type Marshalling - Using Data in Web Services - Using Objects and Intrinsic - The Web Service Behavior - HTML Pattern Matching - **ASP.NET Web Applications** - Application Overview - Using the Global.asax File - Managing Application State - HttpHandlers and Factories.

**UNIT III**

**Cache Services** - Caching Overview - Page Output Caching - Page Fragment Caching - Page Data Caching – **Configuration** - Configuration Overview - Configuration File Format - Retrieving Configuration – **Deployment** - Deploying Applications - Using the Process Model - Handling Errors.

**UNIT IV**

**Security** - Security Overview - Authentication & Authorization – Windows - based Authentication – Forms - Based Authentication - Authorizing Users and Roles - User Account Impersonation -Security and Web Services – **Localization** - Internationalization Overview - Setting Culture and Encoding - Localizing ASP.NET Applications - Working with Resource Files.

## **UNIT V**

**Tracing** - Tracing Overview - Trace Logging to Page Output - Application-level Trace Logging –**Debugging** - The SDK Debugger – **Performance** - Performance Overview - Performance Tuning Tips - Measuring Performance - **ASP to ASP.NET Migration** - Migration Overview - Syntax and Semantics - Language Compatibility - COM Interoperability - Transactions.

### **Reference books:**

1. ASP.NET Developer's Guide by Greg Buczek
2. Build your own ASP.NET Website using C# and VB.NET by Zak Ruvalcaba

**II M.Sc(IT) – III Semester**  
**Fuzzy Logic and Neural Networks**

**Unit – I**

Introduction to Neural networks – applications – architectures – setting weights – common activation functions – Hebb Net – perceptron.

**Unit – II**

Adaline – Pattern Association – Training algorithms for pattern associations – Hetroassociative Memory Neural networks – Autoassociative Net – Iterative autoassociative net – BAM- Applications

**Unit – III**

Neural networks based on competition – Fixed weight competitive nets – Kohonen nets – Learning Vector organization – Counter propagation.

**Unit – IV**

ART networks – introduction – basic architecture – ART1 and ART2 – architecture – algorithms – applications – Backpropagation neural networks – architecture – variations – multiplayer neural nets.

**Unit – V**

Fuzzy logic – Introduction – History of Fuzzy Logic – Fuzzy Logic in Education – why use Fuzzy Logic for control – Myths about Fuzzy Logic – Basic concepts of Fuzzy Logic – Problems – Fuzzy Sets – Linguistic Variables – Possibility Distribution – Fuzzy rules – Fuzzy sets – Fuzzy relations – Fuzzy graphs – Fuzzy arithmetic.

**Books for study**

1. Fundamentals of Neural networks Architecture, Algorithms and applications – Laurene Fausett Pearson edition
2. C++ Neural Networks and Fuzzy Logic by Valluru Rao and Hayagriva Rao – BPB publications
3. Fuzzy Logic Intelligence, Control and Information – John Nen , Reza Langari – Pearson Publication.

## **II M.Sc(IT) - III SEMESTER**

### **ADVANCED JAVA LAB**

1. Create a Payroll application using JDBC.
2. Update a given table using batch update.
3. Java Application to illustrate cursors.
4. HTML and Servlet communication.
5. Chat Programme using Servlets.
6. Servlet Chaining.
7. Shopping cart using JSP.
8. Servlet, JSP, HTML communication.
9. Session bean application(statefull and stateless).
10. Entity bean application.

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**ASP.NET and Its Applications Lab**

1. Perform the following Client – Side validations using the following controls.
  - a. Required Field Validator control.
  - b. Regular Expression Validator control.
  - c. Compare Validator control.
  - d. Range Validator control.
  - e. Validation Summary control.
2. Perform the following operations in connectivity environment
  - a. Select the records from the Data Base table.
  - b. Insert the records into the Data Base table.
  - c. Delete the records from the Data Base table.
  - d. Update the records in the Data Base table.
3. Perform the following operations in connectivity environment using parameters.
  - a. Select the records from the Data Base table.
  - b. Insert the records into the Data Base table.
  - c. Delete the records from the Data Base table.
  - d. Update the records in the Data Base table.
4. Develop your own applications using stored procedures.
5. Bind your own data source to the following server controls
  - a. Repeater control.
  - b. Dropdown List controls.
  - c. RadioButton List control.
  - d. CheckBoxList control.
  - e. ListBox control.
6. Perform the following operations in DataList control.
  - a. Bind any your own Data Source to DataList control.
  - b. Apply styles to DataList control.
  - c. Use Template with DataList control.

7. Perform the following operations in DataList control.
  - a. Edit the items in DataList controls.
  - b. Select the items in the DataList controls.
8. Perform the following operations in DataGrid control.
  - a. Bind any your own Data Source to DataGrid control.
  - b. Adding Bound column to DataGrid control
  - c. Adding Hyperlink column to DataGrid control
  - d. Adding Template column to DataGrid control
  - e. Adding Button column to DataGrid control
  - f. Adding Edit Command column to DataGrid control
9. Perform the following operations in DataGrid control.
  - a. Sort the columns in the DataGrid controls.
  - b. Edit the items in DataGrid controls.
  - c. Select the rows in the DataGrid controls.
10. Create the DataTable dynamically. Perform the following operations with DataTable control.
  - a. Assign Default values to columns
  - b. Making columns Unique.
  - c. Adding Auto Increment columns.
  - d. Update the records in a DataTable.
11. Perform the following operations with DataTable control.
  - a. Retrieve the DataTable schema information.
  - b. Define relationship between DataTables.
12. Perform the following operations with DataView
  - a. Bind any your own Data Source to DataView
  - b. Filter rows in a DataView
  - c. Sort rows in a DataView
  - d. Find rows in a DataView