COMPUTER APPLICATIONS

Skill Based Elective I (Semester IV)

Hardware Troubleshooting

Unit I

Fundamentals of PC technology: Fundamental Building Blocks of the PC – Principles of CPU Operations - CPU family & operation

Unit II

Motherboards: Motherboard Controllers and System Resources – The I / O System Bus – Onboard I / O Devices Power Supply , cooling , and Protection : The Power Supply – Ventilation and Cooling Protection – Power Production and Backup

Unit III

Magnetic Storage –Hard Disk Drives – Opical Storage Devices :Optical Storage Media – CD-ROM Drvices – DVD-ROM Drives - - I/O Ports and Devices : Serial Ports – Parallel Ports – Universal Serial Bus.

Unit IV

Keyboards and Pointing Devices : - Keyboards – Pointing Devices Modems and Communications : Modems–ISDN–CATV Network Modems–DSL Networking: Networking Fundamentals – Network Hardware – Network Protocols.

Unit V

Printers : Types – Printer Attributes – Printer Maintenance – Troubleshooting Tools and Techniques : Tools of the Trade – Basic PC Handling Techniques

Text Book:

1. The Complete Reference PC Hardware: Craig Zacker, John Rourke – Tata McGrawHill, 2001.

Reference Books:

1. Govindarajulu. B, IBM PC and clones : Hardware, Trouble shooting and Maintenance. Second edition, Tata-McGraw Hill, (ISBN 0-07-048286-1).
2. Rosch. Winn L., Hardware bible, Sixth edition, Que/Techmedia publishers, 2003 (ISBN 81-7635-696-4).

Ruby on Rails

Unit I

Welcome to Ruby: Creating a First Web Application-Getting started with Ruby-Checking the Ruby Documentation-Working with Numbers in Ruby-Working with Strings in Ruby-Storing Data in Variables-Creating Constants-Interpolating Variables in Double Quoted Strings-Reading Text on the Command Line-Creating Symbols in Ruby-Working with Operators-Handling Operator Precedence.

Unit II

Conditionals, Loops, Methods and Blocks: Its All about Making choices: the if Statement-Using the case Statement-Using Loops-Creating and Calling a Method.

Unit III

Classes and Objects: All about Encapsulation-Creating a Class-Creating an Object- Basing one Class on Another-Understanding Ruby's Object Access-Overriding Methods-Creating Class Variables-Creating Class Methods.

Unit IV

Welcome to Rails: Putting Ruby on Rails-Introducing Model View Controller Architecture-Giving the view Something to do-Mixing Ruby Code and HTML inside the View-Passing Data from an Action to a View-Escaping Sensitive Text-Adding a Second Action.

Unit V

Connecting to Databases: Creating a Data-Aware Rails Application-Creating a Database-Running the store Application-Adding Another Record-Beautifying a Display-Working with Databases: Displaying items to the customer-Creating a Shopping Cart.

Text Book:

1.Beginning Ruby on Rails by Stephen Holzner, Wiley India Publications,2007.

Reference Book:

1.Ruby on Rails: Up and Running by Bruce A. Tate, Curt Hibbs, O'Reilly Media Publications,2006.

Skill Based Elective III (Semester V)

Web Services

Unit I

Introduction: Services-Web Services - Web Services Application Opportunities-Emergence of Web Service: Server-side Architecture Progression-Client-Side Architecture Progression-Service Oriented Architecture and Web Services.

Unit II

Web Services Application Scenario: Web Services Hype and the Industry-Web Services and the Industry Acceptance-Extensible Markup Language: History of Markup Languages-What is XML ?.

Unit III

Validation of XML Data-Advanced XML-Document Constraining-Simple Object Access Protocol: Background-What is SOAP? - SOAP Interaction-SOAP Modelling - SOAP Encoding-SOAP Binding.

Unit IV

Web Services Description Language: What is WSDL-Web Service Invocation and WSDL-Web Services Description Details-Service Description through WSDL Registries: Universal Description, Discovery and Integration: What is UDDI-UDDI Nomenclature.

Unit V

Core UDDI-Service Publication-Service Discovery-Remote Procedure Call and Messaging: SynchronousWeb Services-Asynchronous Web Services - Remote Procedur Call or Messaging.

Text Book

1. Web Services: An Introduction by B.V. Kumar and S.V. Subrahmanya, Tata McGraw Hill Publications,2007.

Reference Books

1. Sandeep Chatterjee, James Webber, "Developing Enterprise Web Services", Pearson Education, 2004.
2. Frank. P. Coyle, XML, Web Services And The Data Revolution, Pearson Education, 2002.