H.H. THE RAJAH'S COLLEGE(AUTONOMOUS)
DEPARTMENT OF COMPUTER SCIENCE

Subject Code :

PCCM1 - DISTRIBUTED OPERATING SYSTEMS

UNIT I

Fundamentals: evolution – System Models- Distributed Operating System – Issues – Distributed Computing environment. Message passing: Introduction – Features – Issues – Synchronization – Buffering – Message – Encoding – Decoding – process addressing – Failure Handling

UNIT II

Remote Procedure calls: Introduction – Model – Transparency – Implementation - Stub Generation - Messages - Marshaling Arguments and results- server Management - Parameter passing Semantics - Call Semantics - Communication Protocols- Complicated RPC's – Client -Server Binding - Exception handling – Security - Distributed Shared Memory – Introduction- Architecture – Issues - Granularity Structure - Consistency Models – Replacement Strategy – Thrashing

UNIT III

Synchronization: Introduction – Clock Synchronization – Event ordering – Mutual Exclusion – Deadlock – Election Algorithms

UNIT IV

Resource Management: Introduction – Features – Task Assignment approach – Load Balancing Approach – Load –Sharing Approach process Management – Introduction – process Migration – Threads

UNIT V

Distributed File System: Introduction – Features – File Models – Accessing Models – Sharing Semantics – Caching Schemes – File Replication – Fault Tolerance – Atomic Transactions – Design Principles Naming – Introduction – Features – terminologies – Concepts

TEXT BOOK

Pradeep K. Sinha, "Distributed Operating Systems, Concepts and Design" Prentice Hall of India, New Delhi,2001.

UNIT I: Chapter 1, 3
UNIT II: Chapter 4, 5
UNIT III: Chapter 6
UNIT IV: Chapter 7, 8
UNIT V: Chapter 9, 10

REFERENCE BOOK

Andrew S.Tanenbaum "Distributed Operating Systems", Pearson Education,Delhi,2002.

Part – A Answer all the Questions 10 X 2 = 20 Marks	Part – B Internal Choice Type 5 X 5 = 25 Marks	Part – C Answer any 3 Questions 3 X 10 = 30 Marks
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H.H. THE RAJAH'S COLLEGE(AUTONOMOUS)
DEPARTMENT OF COMPUTER SCIENCE

Subject Code :

PCCM2 - ADVANCED JAVA PROGRAMMING

UNIT I

Genesis of Java: Why java is important to the Internet – Byte Code – Java Buzzwords – An overview of Java – Data types, Variables and Arrays – Operators – Control Statements- Introducing Classes and Methods- Inheritance.

UNIT II

Packages and Interfaces – Exception Handling – Multithreaded Programming Applets – Event Handling

UNIT III

Networking – Introducing the AWT: Working with windows, Graphics and Text – Using AWT Controls, Layout Managers and Menus.

UNIT IV

Java Beans: What is Java Bean? - – Advantages of Java Bean – Application Builder Tools – Using the Bean Developer Kit – JAR files – Introspection – Developing a simple Bean Using the BDK- Using Bound Properties – Using Bean Info Interface- Constrained Properties – Persistence – Customizes – The Java Beans API – Using Bean builder. A tour of swing: Japplet- Iconsand Labels – Text fields- Buttons- Combo boxes- Tabbed Panes- Scroll Panes – Trees – Tables.

UNIT V

Servlets: Background – The life cycle of a Servlet – Using Tomcat for Servlet Development – A simple Servlet – The Servlet API – The javax.servlet Package – Reading Servlet Parametrs – javax.servlet.http package – Handling HTTP requests and responses using Cookies – Session Tracking – Security Issues.

TEXT BOOK

"The Complete Reference Java2", Herbert Schildt, Fifth Edition, Tata McGraw Hill

UNIT I: Chapter 1- 8
UNIT II: Chapter 9-11, 19-20
UNIT III: Chapter 21, 22
UNIT IV: Chapter 25, 26
UNIT V: Chapter 27

REFERENCE BOOKS

1. Patrick Naughton "Complete Reference Java2" Tata McGraw Hill, 2003.
2. ElliotteRustry Harold "Java Network Programming "'O'Ralley Publications, 2000.
3. E.Balagurusamy"Programming with Java" Tata McGraw Hill, 2nd Edition, 2008.

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H.H. THE RAJAH'S COLLEGE(AUTONOMOUS)
DEPARTMENT OF COMPUTER SCIENCE

Subject Code :

PCCM3P - ADVANCED JAVA LAB

1. Classes and Objects
2. Constructors and Method Overloading
3. Inheritance and Method Overriding
4. Packages and Interfaces
5. Input / Output streams
6. Swings
7. Applet
8. Multithreading
9. JDBC
10. Networking
11. Java Beans
12. Servlet

H.H. THE RAJAH'S COLLEGE(AUTONOMOUS)
DEPARTMENT OF COMPUTER SCIENCE

Subject Code :

PCCM4 - COMPILER DESIGN

UNIT I

Introduction to Compilers - Compilers and Translators - Assembly language – Macros - Structure of compiler - Compiler writing tools - Bootstrapping. Lexical Analysis - Role of Lexical Analyzer - Regular Expression - finite Automata - Implementation of lexical analyzer - Context Free Grammars - Derivation and Parse trees

UNIT II

Parsers - Shift reduce parsing - Operator precedence parsing - Top down parsing - predictive parsers - LR parsers - construction SLR parser tables – Constructing canonical LR parsing table - construction LALR parsing tables

UNIT III

Syntax directed translation schemes - Implementation of syntax directed translation schemes - Intermediate code – Postfix notation – parse trees and syntax trees – Three address code, quadruples and tuples –Translation of assignment statements - Boolean expression

UNIT IV

Symbol table - The contents of a symbol table - Data structures for symbol tables - Representing scope information - Implementation of a simple stack allocation scheme - Storage allocation in Block Structured Languages. Errors - Lexical phase errors – Syntactic phase errors-Semantics errors

UNIT V

Code optimization - principal sources of Optimization - Loop Optimization - Machine dependent optimization - DAGT representation in Basic Blocks. Code generation - Problems in code generation - A simple code generator - Register allocations and assignment - code generation from DAG's - Peephole optimization

TEXT BOOK

A.V Aho and J .D Ullman, "The Principles of Compiler Design" Narosa Publishing House,1987

UNIT I: Chapter 1, 3, 4
UNIT II: Chapter 5, 6
UNIT III: Chapter 7
UNIT IV: Chapter 9, 10, 11
UNIT V: Chapter 12, 15

REFERENCE BOOK

Reinhard wilhlm , Director Mauser "Compiler Design",1995, Addison Wesley

Part – A Answer all the Questions 10 X 2 = 20 Marks	Part – B Internal Choice Type 5 X 5 = 25 Marks	Part – C Answer any 3 Questions 3 X 10 = 30 Marks
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H.H. THE RAJAH'S COLLEGE(AUTONOMOUS)
DEPARTMENT OF COMPUTER SCIENCE

Subject Code :

PEC1 - ADVANCED MICROPROCESSORS & MICROCONTROLLERS

UNIT I

Register Organization of 8086 – Architecture – Signal descriptions of 8086- Minimum Mode 8086 system and timings – Maximum mode 8086 system and timings – Machine Language Instruction Format – Addressing Modes of 8086 – Instruction set of 8086 – Assembler directives and operators.

UNIT II

A few machine level programs – Machine coding the programs – Programming with an assembler – Assembly Language example programs-Introduction to stack – STACK structure of 88086 – Interrupts and Interrupts service Routines.

UNIT III

Salient Feature of 80286 – Internal Architecture of 80286 – Signal description of 80286 – Real Addressing mode – Protected Virtual Address Mode (PVAM) – Privilege – Protection – Special Operation – 80286 Bus Interface – Basic Bus Operations – Interfacing memory and I/O devices with 80286 – Bus HOLD and HLDA sequence – Interrupt acknowledge sequence – Instruction set features.

Salient features of 80586(PENTIUM) – A few relevant concepts of computer architecture – System architecture- Branch Prediction – Enhanced Instruction set of Pentium.

UNIT IV

PIO 8255 – Modes of Operations of 8255 - Programmable interval timer 8253 – Programmable Interrupt Controller 8259 – Keyboard/ Display Controller 8279 – Programmable communication Interface 8251 USART – DMA Controller 8257.

UNIT V

Architecture of 8051 – Signal Description of 8051 –Register set of 8051 – Important operational features of 8051 – Memory and I/O Addressing by 8051- Interrupts of 8051 – Instruction set of 8051 – Design of a microcontroller 8051 based length measurement system for continuously rolling cloth or paper.

TEXT BOOK

"Advanced Microprocessors and peripherals" A.K Ray and K.M Bhurchandi, TMH 2000

UNIT I: Chapter 1, 2
UNIT II: Chapter 3, 4
UNIT III: Chapter 9, 11
UNIT IV: Chapter 5, 6, 7
UNIT V: Chapter 17

REFERENCE BOOKS

1. Programming and Customizing the 8051 Microcontroller MykePredko, TMH.
2. Microprocessors and Interfacing Programming and hardware Douglas V.Hall – Second Edition Tata McGraw- Hill Publishing company Ltd., New Delhi.

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H.H. THE RAJAH'S COLLEGE(AUTONOMOUS)
DEPARTMENT OF COMPUTER SCIENCE

Subject Code :

PCCM5 - DATA WAREHOUSING AND DATA MINING

UNIT I

Multidimensional Data Model – OLAP operations – Warehousing Schema – Data Warehouse Architecture – Data Warehouse Implementation – Data Mining Applications.

UNIT II

Introduction: Basic data mining tasks – Data mining versus knowledge discovery in databases – Data mining issues –Related concepts-Data mining techniques: Introduction – A statistical perspective on data mining – similarly measures – Decision trees - Neural networks – Genetic algorithms.

UNIT III

Classification: Introduction – Statistical-based algorithms – Distance based algorithms-Decision Tree based algorithm – Neural network based algorithm – Rule based algorithms – Combing techniques. Clustering: Introduction – Similarity and Distance measures – Outliers – Hierarchical algorithm – Partitional Algorithm – Clustering large databases- Clustering with categorical attributes

UNIT IV

Association Rules: Introduction – Large item sets – Basic algorithms – Parallel and distributed algorithm – Comparing approaches – Incremental rules – Advanced Association Rule techniques – Measuring the quality of rules.

UNIT V

Web mining: Introduction – Web content mining – Web structure mining – Web usage mining.

Temporal mining: Introduction – Modeling temporal events – Time series – Pattern detection – Sequence – Temporal association rules.

TEXT BOOK

1. Jiawei Han and Micheline Kamber, "Data Mining Concepts and Techniques".

UNIT I: Chapter 3

2. Margaret H. Dunham " Data Mining", Pearson Education.

UNIT II: Chapter 1- 3
UNIT III: Chapter 4, 5
UNIT IV: Chapter 6
UNIT V: Chapter 7, 8

REFERENCE BOOK

"Introduction to Data Mining with Case Studies" – G.K. Gupta PHI Pvt Ltd

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H.H. THE RAJAH'S COLLEGE(AUTONOMOUS)
DEPARTMENT OF COMPUTER SCIENCE

Subject Code :

PCCM6 - OPEN SOURCE TECHNOLOGY

UNIT I

Essential PHP: Development Environment – Creating and Running PHP Page – Mixing HTML and PHP – Printing – Echo Power – Command Line PHP – Variables – Strings – Constants – Internal Data Types - Operator and Flow Control: Operator - If Statements – Switch Statement – Looping Statement

UNIT II

Strings and Arrays: String Functions – Arrays – Array with Functions and Loops - Multidimensional Arrays - Creating Functions: Function – Passing Variables – Returning Data - Returning Array – Returning List- Returning Reference – Variable Scope - Global Data - Conditional, Variable and Nesting, Functions

UNIT III

Reading data in web pages: Setting up web Page – Handling text fields – Tool Box Controls - Password Controls - Hidden Controls - File Uploads- Handling Buttons - PHP Browser Handling Power

UNIT IV

Object Oriented Programming - File Handling: Opening File – Looping over a file – Reading text and Character – Reading a whole file – Reading a file into array - Getting file information – Setting file pointer – Copying, Deleting, Reading and Writing files - Appending and locking files

UNIT V

Working with Database: Database – Essential SQL- Creating MYSQL Database – Creating a new table – Putting data – Accessing data – Updating – Inserting – Deleting Records – Creating new Database – Sorting Data - Section cookies and FTP

TEXT BOOK

"THE COMPLETE REFERENCE: PHP", Steven Holzner, McGraw Hill Education (India) Edition 2008

Unit I: Chapter 1, 2
Unit II: Chapter 3, 4
Unit III: Chapter 5, 6
Unit IV: Chapter 7, 9
Unit V: Chapter 10, 11

REFERENCE BOOK

"Setting Up LAMP: Getting Linux, Apache, MySQL, and PHP and Working Together", Eric Rosebrock, Eric Filson, Published by John Wiley and Sons, 2004.

Part – A Answer all the Questions 10 X 2 = 20 Marks	Part – B Internal Choice Type 5 X 5 = 25 Marks	Part – C Answer any 3 Questions 3 X 10 = 30 Marks
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H.H. THE RAJAH'S COLLEGE(AUTONOMOUS)
DEPARTMENT OF COMPUTER SCIENCE

Subject Code :

PCCM7P - OPEN SOURCE TECHNOLOGY LAB

1. Controls and Functions
2. Passing Variables using HTML
3. String Functions and Arrays
4. Applications Form using MySql Table
5. File System Functions
6. Network Functions
7. Date and Time Functions
8. File Upload and Converting Image File Types
9. Session
10. Cookies
11. Message Passing Mechanism between Pages

H.H. THE RAJAH'S COLLEGE(AUTONOMOUS)
DEPARTMENT OF COMPUTER SCIENCE

Subject Code :

PCCM8 - GRID COMPUTING

UNIT I

Introduction: Grid Activities – Overview of Grid Business Areas – Grid Applications-Grid infrastructure.

UNIT II

Grid Computing organization and their roles: Organizations developing grid standards – Grid computing toolkits – Commercial Organization – Using Grid Based Solutions.

UNIT III

Grid Computing Anatomy: Grid Problem Concept – Architecture – Relationship to other distributed technologies - Grid Computing Road Map: Automatic Computing Service oriented Architecture and Grid – Semantic Grids.

UNIT IV

The New Generation of Grid Computing Applications: Service Oriented Architecture – Web Service Architecture – XML Message and Enveloping – Service Message Description Mechanisms- Relationship between web service and Grid Service- Role of WS-I Organization.

UNIT V

Open Grid Service Architecture (OGSA): Architecture and Goal.Sample use and cases: Commercial Data Centre (CDC) – National Fusion Collaborator (NFS) - Online Media and Entertainment – OGSA platform components.

TEXT BOOK

"Grid Computing" – Joshy Joseph & Craig Fellenstein – PEARSON – Eighteenth impression – 2008

UNIT I: Chapter 1
UNIT II: Chapter 2
UNIT III: Chapter 3, 4
UNIT IV: Chapter 5
UNIT V: Chapter 6, 7, 8

REFERENCE BOOKS

1. "Introduction to Grid Computing "– Bart Jacob, Michael Brown, Kentaro Fukui, NiharTrivedi – IBM Red Books Publisher – 2005.
2. "Grid Computing: Making the Global Infrastructure a Reality" – Fran Berman, Geoffrey Fox, Anthony J.G. Henry – John Wiley & Sons- 2003.

Part – A Answer all the Questions 10 X 2 = 20 Marks	Part – B Internal Choice Type 5 X 5 = 25 Marks	Part – C Answer any 3 Questions 3 X 10 = 30 Marks
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H.H. THE RAJAH'S COLLEGE(AUTONOMOUS)
DEPARTMENT OF COMPUTER SCIENCE

Subject Code :

PEDC - HUMAN- COMPUTER INTERACTION

UNIT I

Introduction: What is HCI - The Human: Input – Output Channel. The Computer: Text Entry devices – positioning pointing and drawing - The Interaction: Models of Interaction design focus: Video recorder – Frameworks and HCI – Ergonomics – Interaction – Styles – Elements of the WIMP interface – Interactivity – The context of the interaction – Experience, Engagement and fun.

UNIT II

Paradigms: Introduction – Paradigms for interactions. Interaction design basics: Introduction – What is design – The process of design – User focus – scenarios – navigation design – screen design and layout – Iteration and prototyping.

UNIT III

HCI in the software process: Introduction – The software life cycle – Usability Engineering – Interactive design and prototyping – design rationale. Design Rules: Introduction – Principles to support usability – Standards – Guidelines – Golden rules and heuristics – HCI patterns.

UNIT IV

Implementation Support: Introduction – Elements of windowing system – Programming the application – Using Toolkits – User Interface management systems. Evaluation techniques: What is Evaluation – Goals of Evaluation – Evaluation through expert analysis – Evaluation through user participation – Choosing an evaluation method

UNIT V

Universal Design: Introduction – Universal design principles – Multi Modal Interaction - Designing for diversity. User Support: Introduction- Requirements of user support – Approaches to user support – Adaptive to user support – Adaptive help system – Designing user support systems.

TEXT BOOK

"Human –Computer Interaction", Alan Dix, Janet Finlay, Gregory D. Abowd, Russell Beale, Pearson Education, Ltd Third Edition

UNIT I: Chapter 1.1, 1.2, 2.1 – 2.3, 3
UNIT II: Chapter 4, 5
UNIT III: Chapter 6, 7
UNIT IV: Chapter 8, 9
UNIT V: Chapter10, 11

REFERENCE BOOK

"The Human- Computer Interaction Handbook" – Andrew sears, Julie A.Jacko- CRCPress, Technology & Engineering. Sep- 2007.

Part – A Answer all the Questions 10 X 2 = 20 Marks	Part – B Internal Choice Type 5 X 5 = 25 Marks	Part – C Answer any 3 Questions 3 X 10 = 30 Marks
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H.H. THE RAJAH'S COLLEGE(AUTONOMOUS)
DEPARTMENT OF COMPUTER SCIENCE

Subject Code :

PEC2 - WEB SERVICES

UNIT I

Introduction: What are Web Services? SOAP WSDL UDDI – Why was a service are important? – The evolution of web applications Not Just another distributed Computing platform – Web Services and enterprises. XML Fundamentals: The Lingua Franca of Web Services – XML Documents – XML namespaces Explicit and Default namespaces, inheriting namespaces, and not inheriting namespaces, Attributes and namespaces

UNIT II

XML Schema XML Schema and namespaces, A First Schema, Implementing XML Schema types, The any Element, Inheritance, Substitution groups, Global and local type declarations, Managing Schemas, Schemas and instance documents, XML Schema best practices. SOAP: SOAP Messages – SOAP Encoding – RPC

UNIT III

WSDL: WSDL – Using SOAP WSDL - UDDT at glance – The UDDI Business registry – UDDI under the covers – Accessing UDDI – How UDDI is playing out

UNIT IV

Conversations: Overview – Web Services Conversation Language – WSCL Interface components – The Bar Scenario Conversations – Relationship between WSCL and WSDL

UNIT V

Workflow – Business Process Management – Workflows and Workflow Management Systems-Business Process Execution Language for Web Services

TEXT BOOK

Sandeep ChatterJee, James webber, "Developing Enterprise web services". Pearson Education, 2004

UNIT I: Chapter 1, 2
UNIT II: Chapter 2, 3
UNIT III: Chapter 3, 4
UNIT IV: Chapter 5
UNIT V: Chapter 6

REFERENCE BOOK

Frank, P.Coyle, XML, Web Services and the Date Revolution, Pearson Education, 2002.

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H.H. THE RAJAH'S COLLEGE(AUTONOMOUS)
DEPARTMENT OF COMPUTER SCIENCE

Subject Code :

PCCM9 - CRYPTOGRAPHY AND NETWORK SECURITY

UNIT I

Overview: The OSI Security architecture – Security Attacks, Services and Mechanisms- A model for network security - Classical Encryption Techniques: Symmetric Cipher model- Substitution Techniques – Transposition Techniques - Block Cipher and DES: Block Cipher Principles - The Data Encryption Standard (DES) – The Strength of DES.

UNIT II

Advanced Encryption Standard: Finite Field Arithmetic - AES Structure - Block Ciphers Operation: Multiple Encryption and triple DES – Electronic Code Book – Ciphers Block Chaining Mode- Cipher Feedback Mode – Output Feedback Mode – Counter Mode. Pseudorandom Number Generation and Stream Ciphers: Principles of Pseudorandom number generation – Pseudorandom number generation – stream ciphers- RC4.

UNIT III

Public-Key Cryptography and RSA: Principles of Public- Key Cryptosystems – RSA algorithm. Other Public - Key Cryptosystems: Diffie - Hellman Key Exchange – Elliptic curve Arithmetic – Elliptic curve Cryptography. Message Authentication Code: Message Authentication Requirements – Message Authentication Functions- Requirements for Message Authentication codes- Security of MACs.

UNIT IV

Electronic Mail Security: Pretty Good Privacy – S/MIME.IP Security: IP Security Overview – IP Security Policy – Encapsulating Security Payload – Combining Security Associations - Internet Key Exchange – Cryptographic Suites.

UNIT V

Intruders: Intruders – Intrusion detection – Password Management. Malicious Software: Viruses – Virus Counter Measures. Firewall: The need for Firewalls- Firewall Design Principles- Trusted Systems.

TEXT BOOK

"Cryptography and Network Security", William Stallings, Third Edition, Pearson Education, 2006

UNIT I: Chapter 1.2-1.6, 2.1-2.3, 3.1-3.4.
UNIT II: Chapter 5.1, 5.2, 6.1-6.6, 7.1, 7.2, 7.4, 7.5.
UNIT III: Chapter 9.1, 9.2, 10.1, 10.3, 10.4.
UNIT IV: Chapter 18.1, 18.2, 19.1, 19.2, 19.3, 19.4, 19.5, 19.6.
UNIT V: Chapter 20.1-20.3, 21.2, 21.3, 22.1-22.3.

REFERENCE BOOKS

1. "Introduction to Cryptography", Johannes A. Buchaman, Springer – Verlag.
2. "Cryptography and Network Security", AtulKahate, TMH.

Part – A Answer all the Questions 10 X 2 = 20 Marks	Part – B Internal Choice Type 5 X 5 = 25 Marks	Part – C Answer any 3 Questions 3 X 10 = 30 Marks
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H.H. THE RAJAH'S COLLEGE(AUTONOMOUS)
DEPARTMENT OF COMPUTER SCIENCE

Subject Code :

PCCM10 - PROGRAMMING IN ASP.NET

UNIT I

.Net Framework - Learning the Common Language Runtime - .Net Class Library - .net Languages- ASP.Net File Type – Data Types, Objects & Namespaces – Code Behind.

UNIT II

Web Form Fundamentals- Server Controls – HTML Control Classes - Web Controls – Web Control Classes – Auto Post Back and Web Control Events.

UNIT III

Validation and Rich Controls – The Calendar Control – Ad Rotator Validation Controls – Validated Customer Form.

UNIT IV

Characteristics of ADO.Net – ADO.Net Data Objects Model – SQL Bases – Creating a Connection- Accessing Disconnected Data – Modifying Disconnected Data- Updating Disconnected Data.

UNIT V

Data Binding – Introducing Data Binding - Single value Data Binding – Repeated Value Data Binding – Data Binding with Databases – Data List - Data GridRepeater

TEXT BOOK

"THE COMPLETE REFERENCE ASP.NET", Steven Holzner, McGraw Hill Education (India) Edition 2008

UNIT I: Chapter 1 – 3, 5

UNIT II: Chapter 6, 7

UNIT III: Chapter 9

UNIT IV: Chapter12, 13

UNIT V: Chapter 14, 15

REFERENCE BOOKS

1. Programming and Customizing the 8051 Microcontroller MykePredko, TMH.
2. Microprocessors and Interfacing Programming and hardware Douglas V.Hall – Second Edition Tata McGraw- Hill Publishing company Ltd., New Delhi.

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H.H. THE RAJAH'S COLLEGE(AUTONOMOUS)
DEPARTMENT OF COMPUTER SCIENCE

Subject Code :

PCCM11P - PROGRAMMING IN ASP.NET LAB

1. HTML Control Classes
2. Web Controls
3. Validation Controls
4. Rich Controls
5. Database Handling
6. Data Binding with Databases
7. Data List

H.H. THE RAJAH'S COLLEGE(AUTONOMOUS)
DEPARTMENT OF COMPUTER SCIENCE

Subject Code :

PCCM12 - MOBILE COMPUTING

UNIT I

Introduction: Mobile and Wireless Devices – Simplified Reference Model – Need for Mobile Computing – Wireless Transmission – Multiplexing – Spread Spectrum and cellular systems – Medium Access Control – Comparisons.

UNIT I1

Telecommunications System: Telecommunication System – GSM – Architecture – Sessions – Protocols – Hand over and Security – UMTS and IMT 2000 – Satellite System.

UNIT I11

Wireless LAN: IEEE S02.11 – Hiper LAN – Bluetooth – MAC Layer – Security and Link Management.

UNIT IV

Mobile IP: Goals – Packet Delivery – Strategies – Registration – Tunneling and Reverse Tunneling – Adhoc Networks – Routing Strategies.

UNIT V

Wireless Application Protocol: Wireless Application Protocol (WAP) – Architecture – XML – WML Script – Applications.

TEXT BOOK

Jochen Schiller, "Mobile Communication", Pearson Education, Delhi, 2000.

UNIT I: Chapter 1 - 3
UNIT II: Chapter 4, 5
UNIT III: Chapter 7
UNIT IV: Chapter 8
UNIT V: Chapter 10

REFERENCE BOOK

"The Wireless Application Protocol: Writing Applications for the Mobile Internet", Sandeep Singhal, et al.

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H.H. THE RAJAH'S COLLEGE(AUTONOMOUS)
DEPARTMENT OF COMPUTER SCIENCE

Subject Code :

PEC3 - SOFTWARE PROJECT MANAGEMENT

UNIT I

Introduction to software management: Introduction- why is SPM important? –Project- Software project Vs other type of project – Contract and technical project management – Activities- plan, methods And methodologies – categorizing software projects – stakeholders – Setting objectives – Business case – project success and failures –Managements.

Project Evaluation and Programme Management: Introduction-Business case- Project portfolio management- Evaluation of individual Projects-Cost benefit Evaluation Techniques - Risk Evaluation - Programme Management – managing the allocation of resources – Strategic programme management – Creating a programme and aids –Benefits management.

UNIT II

Overview of Project Planning: Introduction- Stepwise Project Planning- steps. Selection of An Appropriate Project Approach: Introduction-Build or buy- Choosing methodologies and technologies-- software Processes and models-choice of Process models- Structure Vs speed of delivery – Waterfall model - spiral model – software prototyping - Rapid application development – Agile methods- Extreme programming.

UNIT III

Software Effort Estimation: Introduction-Where are estimates done? – Problems with over and under estimates – Basis for estimating and its Techniques – Bottom up estimating-Top down approach and parametric models- Expert judgment-Estimating by analogy Function point analysis-FP markII-COSMIC full FP-COCOMO II-cost estimation and staffing patterns.

Activity Planning: Introduction-objectives-when to plan?-project schedules-Projects activities-network Planning models-sequencing and scheduling activities-Formulating a network model-Adding the time dimension-Forward and backward Pass- critical Path-activity Float- Shortening the project duration-critical activities- Activity on arrow network.

UNIT IV

Risk management: Introduction-Risk-Categories of Risk-a framework for dealing with risk-Risk identification-Risk assessment-Risk planning-Risk Management-Evaluating Risk to Schedule-Applying the PERT Technique-Monte-Carlo Simulation-Critical Chain Concepts.

UNIT V

Monitoring and Control: Introduction-Creating the framework-collecting the data-Review-Software Configuration Management. Managing Contracts: Introduction-Types of Contracts-Contract Management- Managing People in software environments

TEXT BOOK

"Software Project Management" – Bob Hughes, Mike Cotterell and Rajib Mall- Fifth Edition

UNIT I: Chapter 1, 2
UNIT II: Chapter 3, 4
UNIT III: Chapter 5, 6
UNIT IV: Chapter 7, 8
UNIT V: Chapter 9, 10, 11

REFERENCE BOOK

Software Project Management –Walker Royce-Pearson Education

Part – A Answer all the Questions 10 X 2 = 20 Marks	Part – B Internal Choice Type 5 X 5 = 25 Marks	Part – C Answer any 3 Questions 3 X 10 = 30 Marks
Question 1,2 – 1 Unit 3,4 – II Unit 5,6 – III Unit 7,8 – IV Unit 9,10 – V Unit	11a (or) 11b – 1 Unit 12a (or) 12b – II Unit 13a (or) 13b – III Unit 14a (or) 14b – IV Unit 15a (or) 15b – V Unit	16 – I Unit 17 – II Unit 18 – III Unit 19 – IV Unit 20 – V Unit