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Job o

Chapter Local Development Techniques

Chapter Code **D**   **Credits**

Job Roles

Data Entry operator I   Help Desk   Office Executive   oftware   rain

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Job Role: *Data Entry operator I He p Des   Office Executive   oftware rainee e nica upport oice B O Lab e nician Database A inistrator   etwor A inistrator App ication rog m er*

Objectives:

1. To familiarize the students with the Fundamentals of Information Technology and its applications.
2. To use computer syst 9 0 Td ( )Tj /R13 12 Te1(t)-2(9 0 Td ( )64(s)-1-13.8 Td Td ( )6-2(og)-10.003.8 T

Working with Formulae, Efficient Data Display with Data formatting (number formatting, date formatting etc.), Function: different types of functions and their usage Worksheet Printing. Working with Graphs and Charts: Creating Chart and graphs, using chart wizard, sizing and moving parts, updating charts, Changing chart types, Formatting Charts. Database Management; Finding records with Data form, Adding/Deleting Records, Filtering Records in a worksheet, Sorting; Macros: Creating Macros, Record Macros, Running Macros, Assigning Macros to Buttons.

n t I

 r s ntat on ac a s Basics, General Features, Creating a presentation, Different types of slide views, Master Slides and its use, Formatting Slides: slide design, Layout and background; Animation effect, Transition effect, timing effects, Macros.

Databas   ac a : Introduction to Database, Tables, Data Types, Attributes, Records; Overview of MS-ACCESS, Creating Database, Creating Tables, Data types, Importing and Exporting data, using Wizards, Creating forms and queries.

References Resources:
   1.

B oc o twar D v op nt
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References Resources::

1. An Introduction to Database System, Galgotia Publications By Desai
2. Database System Concepts, McGraw Hill By Henry F. Korth
3. C.J. Date, A. Kannan, S. Swamynathan," An Introduction to Database system", Pearson.
4. Dr. Madhulika Jain,Vinita Pillai, Shashi Singh and Satish Jain, "Introduction to Database Management", BPB.
5. High Performance MySQL: Optimization, Backups, Replication, and More2nd Edition by Baron Schwartz (Author), Peter Zaitsev (Author),
6. MySQL in a Nutshell (In a Nutshell (O'Reilly)) 2nd Edition by Russell J. T. Dyer.

BCA Software Development
Semester III

Paper Title: PC Maintenance & Troubleshooting

Paper Code: BCA-D   **Credits**

Job Roles: *Data Entry operator I, Help Desk, Office Executive, software trainee, technical support, voice BPO, Lab technician, Database Administrator, Network Administrator, Application Programmer*

Objectives:
1. To equip the students with the knowledge of hardware maintenance, Software installation and handling troubleshooting.
2. To enhance the basic hardware skills of the students.

Instructions
1. The syllabus of this paper has been divided into FOUR units.
2. Examiner will set a total of **NINE** questions comprising Two questions from each unit, including Question No. 1 (compulsory) of short answer type covering the whole syllabus.
3. The students are required to attempt one question from each unit and the entire Compulsory Question No. 1.
4. All questions carry equal marks.

Unit I

Troubleshooting General Problems: Introduction, General Troubleshooting rules, Common Problems & Solutions, Preventive Maintenance.

BIOS: Typical Motherboard BIOS, BIOS Features, BIOS & Boot Sequences, BIOS Shortcoming & Compatible Issues, BIOS Troubleshooting, BIOS Upgrades.

Unit II

Hard Disk

Basic Software Development Master II

Chapter Four Industrial Training

Chapter Code I   Credits

Job Roles: Data Entry operator I Help Desk Office Executive Software Trainee Technical Support Voice BPO Lab Technician Database Administrator Network Administrator Application Programmer

At the end of the semester students should compulsorily undergo two weeks in industrial training and the relevant certificate and project reports has to be submitted

The report should consist of the following

1. Cover page including project title, name of the student, name of department and project guide.
2. Acknowledgements
3. Contents with page number
4. Introduction and background of the application Objectives
5. System analysis
6. System feasibility study
7. Further scope of the project Bibliography
8. Appendices

B.Sc. Software Development
Semester III

Paper Title: Mathematical Tools for Computer Science

Paper Code: D

Credits

Job Roles: *Information and system operations analyser software programmer, system Analyst I, Officers Computer Assistants for the General Office, Accounts and management Database Administrator, network Administrator, website Development programmer.*

Objectives:
1. To develop arithmetic, algebraic, geometric, and problem-solving skills.
2. To apply problem solving and logical skills.
3. To make the students familiar with several subfields of mathematics (e.g. numerical analysis, topology, operations research).

Instructions
1. The syllabus of this paper has been divided into FOUR units.
2. Examiner will set a total of **NINE** questions comprising Two questions from each unit, including Question No. 1 (compulsory) of short answer type covering the whole syllabus.
3. The students are required to attempt one question from each unit and the entire Compulsory Question No. 1.
4. All questions carry equal marks.

Unit I

Sets and Relations:- Definition of sets, subsets, complement of a set, universal set, intersection and union of sets, De-Morgan's laws, Cartesian products, Equivalent sets, Countable and uncountable sets, minset, Partitions of sets. **Relations**: Basic definitions, graphs of relations, properties of relations.

Unit II

Matrix:- Introduction, Different kinds, matrix addition and scalar multiplication, multiplication of matrices, transpose etc. Square matrices, inverse and rank of a square matrix, differentiation and Integration.

Unit III

Numerical Methods Solving simultaneous equations using Gauss elimination, Gauss Jordan Methods, Matrix Inversion method.

Unit IV

Linear programming :- Graphical and Simplex method, Duality in Linear programming, Transportation problems, Assignment and travelling salesman problem.

References Resources::
1. Hiller, F.S & Liberman,G.J: Introduction To Operations Research, 2nd Edition Holden Day Inc London.
2. Schaum Series: Theory and Problems of Essential Computer Mathematics, Mc Graw Hill, New York, 3rd Edition.
3. Salaria, R.S: Computer Oriented Numerical Methods, Khanna Book Publishing Co (P) Ltd, New Delhi.
4. Liu, C. L.: Elements of Discrete Mathematics, McGraw Hill.

Basic Software Development

Semester III

Paper Title: Object oriented programming using C++

Paper Code: D   Credits

Job Roles: Information and systems operation, Manager, software Programmer, system Analyst I Officers Computer Assistants for the General Office, Accounts, Management, Database Administrator, Network Administrator, Website Development, Programmer

Objectives:
1. To help the students gain a better understanding of OO design and program implementation by using OO language features.
2. To make students learn various concepts of object oriented approach towards problem solving.
3. To introduce different techniques pertaining problem solving skills..

Instructions
1. The syllabus of this paper has been divided into FOUR units.
2. Examiner will set a total of **NINE** questions comprising Two questions from each unit, including Question No. 1 (compulsory) of short answer type covering the whole syllabus.
3. The students are required to attempt one question from each unit and the entire Compulsory Question No. 1.
4. All questions carry equal marks.

Unit I

Concepts of object oriented programming : Introduction to OOP, Difference between OOP and Procedure Oriented Programming, Object, Class, Encapsulation, Data Hiding, Abstraction, Polymorphism, Inheritance. Analysis and design of system using Object Oriented Approach, Structure of a C++ Program and I/O streams.

Unit II

Classes Class declaration: Data Members, Member Functions, Private and Public Members, Data Hiding and Encapsulation, Arrays within a class.

Objects Creating objects, Accessing class data members, Accessing member functions, Array of objects, Objects as function arguments: Pass by value, Pass by reference, Pointers to Objects.

Constructors and Destructors: or1 [:)-2(TJ /R13 1250TJ /R4-1250TJ /R42(e)4(s)-1 (c)4(l-2(a)-6(r)3(a)4(

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Job Roles:

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Job Roles: e   nt   y an   Infor ation syste s operation   ana er   oftware ro ra   er   yste

Basic Software Development

Master I

Paper Title: Web Programming

Paper Code: D   **Credits**

Job Roles: Information and systems operations, Manager, Software Programmer, System Analyst I, Officers, Computer Assistants for the General Office, Accounts Management, Database Administrator, Network Administrator, Website Development Programmer

Objectives:

1. To introduce the whole range of web technologies starting from HTML, DHTML, JAVA SCRIPT.
2. To focus on practical aspects of the web technologies.
3. To make the students understand the various steps in designing a creative and dynamic website.

Instructions

1. The syllabus of this paper has been divided into FOUR units.
2. Examiner will set a total of **NINE** questions comprising Two questions from each unit, including Question No. 1 (compulsory) of short answer type covering the whole syllabus.
3. The students are required to attempt one question from each unit and the entire Compulsory Question No. 1.
4. All questions carry equal marks.

SECTION A

Basic terminology About Web Server; Web Client/Browser, Understanding how a Browser communicates with a Web Server, Website, Webpage, Static Website, Dynamic Website, Internet, Intranet, Extranet, WWW, URL

HTML Structure of an HTML program, Paragraph Breaks, Line Breaks; Emphasizing Material in a Web Page (Heading Styles, Drawing Lines); Text Styles (Bold, Italics, Underline); Other Text Effects (Centering (Text, Images etc.)

Lists Unordered List, Ordered Lists, Definition lists Adding Graphics to HTML Documents using the Border, Width, Height, Align, ALT Attributes

Tables Caption Tag, Width, Border, Cell padding, Cell spacing, BGCOLOR, COLSPAN and ROWSPAN Attributes.

SECTION B

Linking Documents Anchor tag, External Document References Resources:, Internal Document References Resources: and Image Maps

Frames Introduction s 805(,6)-10(c)4(tNn36e)4(s)-1(e)Td [Nn3Nn36essCTI1(e(e)4(-2(a)9.96 a)4

EC I N C

Java cr pt Introduction and Features of JavaScript, Writing JavaScript into HTML, tokens, data types, variables, operations, control constructs, strings arrays, functions, core language objects, client side objects, event handling. Applications related to client side form validation.Other Built-In Objects in JavaScript: The String Object, The Math Object, The Date Object;

EC I N D

Introduct on to Dr a w av r Understanding Workspace Layout, Managing Websites, Creating a Website, Using Dreamweaver Templates, Adding New WebPages, Text and Page Format, Inserting Tables, Lists, Images, Adding Links.

Web Hosting: Understanding Domain Name & Web Space, Getting a Domain Name & Web Space (Purchase or Free), Uploading the Website to Remote Server, Introduction to Open Source Third party FTP Tools

r nc s sourc s

1	Wanger & Wyke	:	Java Script Unleased, Pearson Education, New Delhi.
2	Bayross, Ivan :	:	HTML, DHTML, Java Script by BPB, Latest reprint
3	Schildt , Herbert	:	The Complete Reference Java 2, TMH, Latest reprint
4	Thomas Powell	:	HTML & CSS: The Complete Reference
5	John Pollock	:	JavaScript, A Beginner's Guide
6	Janine C. Warner	:	Dreamweaver CS5 For Dummies Paperback Edition
7	Joseph Lowery	:	Adobe Dreamweaver CS5 Bible Paperback Edition
8	David Powers	:	The Essential Guide to Dreamweaver CS4

2. Rockley, L.E.,: Finance for the Non-Accountant 2nd. Edition, London: Business Book.
3. Levy and Sarnat,: Principle of Financial Management, Prentice Hall International, PHI.
4. Arnold,: Financial Accounting, Prentice-Hall International (Paperback Edition).
5. Horngren and Sundem: Introduction to Financial Accounting, Prentice-Hall International (Paperback Ediion) N.D: PHI.
6. Murthy, U.S: Management Finance, 2nd. Edition, Vakils Fefers & Simons Ltd.
7. Van Home, James, C.: Financial Management & Policy, Prentice Inc.
8. Pandey, I.M.: Financial Management, Vikas Publication, 6th Rev. ed., N. Delhi.

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Job Roles: Java *rog m er rainе Linux A$_m$ inistrator eb rog m er rainе Database a$_m$ inistrator etwor A$_m$ inistrator C net software еvе oper yst$_m$ Ana yst оftware Qua ity еn inеer*

Objectives:
1.

Basic Software Development

Master

Job Roles: Java Programmer Trainee, Linux Administrator, Web Programmer Trainee, Database Administrator, Network Administrator, C .net software Developer, System Analyst, Software Quality Engineer

Objectives:

To make students familiar with development of console, windows and web applications using C# on .NET platform.

To improve object-oriented programming skills through practice and insights gained by studying a new programming language.

To gain a working knowledge of the C Sharp programming language and build object-oriented applications using C Sharp.

Instructions

1. The syllabus of this paper has been divided into FOUR units.
2. Examiner will set a total of **NINE** questions comprising Two questions from each unit, including Question No. 1 (compulsory) of short answer type covering the whole syllabus.
3. The students are required to attempt one question from each unit and the entire Compulsory Question No. 1.
4. All questions carry equal marks.

UNIT I

Introduction to ASP.NET NET Architecture, ASP.NET Fundamentals Compilation Modes of .Net Architecture, Understanding Client Server Architecture, Introduction To Web Technologies.

UNIT II

Standard Web Controls Templates in ASP. NET, Composite Data Bound Controls, Designing Website With Master Pages, Maintaining Application State, Microsoft Application Block, OOPS/COM/DLL/Assembly.

UNIT III

Globalization And Localization: Custom Controls, Web User Con210.72 0 Td ( )Tj /R4(s)-0 Td (7)-3

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Job Roles: Java Programmer Trainee Linux Administrator eb Programmer Trainee Database Administrator etwor Administrator C net software eve oper yste Analyst oftware Quality Engineer

ownership, User and ownership, Groups, Changing group ownership, File Permissions, UMASK Setting, Changing File Permission, Changing directory permissions. Bash: What is Shell? How the Shell gets Started, The most common Shells; The Bourne Shell: Command-line Completion, Wildcards, Command History, Aliases, Input2(or) Input2(or) lli;.Pons2.7our]

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Job Roles: *Java* *Pro rg er rainee Linux* A_m *inistrator eb Pro rg er rainee Database* a_m *inistrator etwor* A_m *inistrator C net software eve oper yst Ana yst oftware Qua ity en ineer*

b ct v s:

1. This course enables students to be familiar with Emerging Technologies such as Parallel Computing, Cloud Computing, Green Computing and Data Min2(a)47 D10(2(a)4(s)-

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Job Roles: Java rog rammer rainee Linux A$_m$ inistrator   eb rog ram er rainee
Database a$_m$ inistrator   etwor A$_m$ inistrator C net software   eve oper   yst e
Ana yst   oftware Qua ity eng ineer

Objectives. h is course wi   enab e th e stu ents to   earn th e PHP an uag e for website
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Instruct ons
1. The syllabus of this paper has been divided into FOUR units.
2.

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Job Roles: Java $program$ er   rainee Linux A_m inistrator   eb $program$ er   rainee
Database a_m inistrator   etwor A_m inistrator C net software   eve oper yst_e
Ana yst   oftware Qua ity ens ineer

b   ct v s:-
   1. This course will enable the students to manage the network devices and
      configuring servers

Instruct ons nnt

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