Govt. Digvijay Autonomous PG College Rajnandgaon(CG)

SCHEME OF EXAMINATION & SYLLABUS

FOR

DIPLOMA IN COMPUTER APPLICATION
(SEMESTER EXAM)

UNDER

DEPARTMENT OF COMPUTER APPLICATION

SESSION – 2025-26

(APPROVED BY BOARD OF STUDIES)

Govt. Digvijay Autonomous PG College ,
Rajnandgaon(CG)

Department of Computer Application

Session – 2025 -26

List of Members of Board of Studies(BOS)

S.No	Name of Member	Nominee Type	Signature
1	Mrs. Hempushpa	Chairman	
2	Dr. Durga Prasad Rao	VC Nominee	
3	Prof. Gulame Mustafa Ansari	Principal Nominee	
4	Prof. Shailendra Arya	Principal Nominee	
5	Mr. Anshu Ramteke	Adviser Member	
6	Ms. Nadini sahu	Ex-Student	

Marking Scheme for DCA

D.C.A. (Diploma in Computer Applications)

FIRST SEMESTER

Subject Code	SUBJECTS	Teaching Load Per Week			Credit L+(T+P)/2	Examination Marks					
						Max. Marks			Min. Marks		
		L	T	P		Th	Pr	Total	Th	Pr	Total
DCA101	Essential of Information Technology and OS	3	2	-	4	100	-	100	33	-	33
DCA102	Essentials of Office Automation	3	2	-	4	100	-	100	33	-	33
DCA103	Programmingin"C" Language	3	2	-	4	100	-	100	33	-	33
DCA104	Practical based on DCA 102 & DCA 103			3 x 2	3	-	100	100	-	40	40
	TOTAL	9	6	6	15	300	100	400	99	40	139

SECOND SEMESTER

Subject Code	SUBJECTS	Teaching Load Per Week			Credit L+(T+P)/2	Examination Marks					
						Max. Marks			Min. Marks		
		L	T	P		Th	Pr	Total	Th	Pr	Total
DCA105	Programming in Python	3	2	-	4	100	-	100	33	-	33
DCA106	E-Commerce	3	2	-	4	100	-	100	33	-	33
DCA107	HTML & Internet Applications	3	2	-	4	100	-	100	33	-	33
DCA108	Practical based on DCA105 & DCA 107			3 x 2	3	-	100	100	-	40	40
	TOTAL	9	6	6	15	300	100	400	99	40	139

[DURATION - ONE YEAR - FULL TIME]

Durg University, Durg (CG)

ORDINANCE NO. - 129

1. Name of the course : Diploma in Computer Application (Part-time course) The course will be under the Board of Studies in Computer Science of the University for academic purposes.

2. Duration : One Year

The Examination shall consists of Total 8 papers in a year (Six Theory Papers and Two Practical), each carrying 100 marks. Candidate should pass in Theory and Practical Examinations separately. Each Theory paper will be having 50 marks each as sessional marks, which will be awarded, internally by teachers and Head of the Department (Computer Application). Minimum passing marks will be 33% in theory and 40% each in Practical & Sessional. A candidate failing in one or more subjects will be required to clear it in the next Annual examination. His/Her result will be declared only after he/she clears all the papers, the result should be declared according to the following.

1. Less than 33% - FAIL
2. 33% & more but less than 50% - PASS DIVISION
3. 50% & more but less than 60% - SECOND DIVISION
4. 60% & more but less than 75% - FIRST DIVISION
5. 75% & more - FIRST DIVISION WITH DISTINCTION

A candidate will be permitted to appear in the examination of the course for a maximum period of 4 years. If he/she fails to clear the course within the period of 4 years, he/she will be dropped out of the course.

3. Eligibility and Admission :

A candidate who has passed the Higher Secondary Examination or Equivalent.
In each course 40 students will be admitted in this course but University reserves the right to alter the intake. The reservation of seats will be made as per govt. Rules for SC/ST/OBC/PH category. In case no candidate is eligible /available for admission under reserved category the seats will be treated as unreserved and will be made available for general category candidates. Candidates doing any other Under Graduate or PG Course can also do this course.

4. Fee Structure :

University reserves the right to decide the fee structure, time to time.

5. Syllabus :

The syllabus & scheme of examination has been approved By Faculty of Computer Science Under Durg Vishwavidhalaya, Durg(C.G.) and subject to alteration by the Board of Studies.

DEPARTMENT OF COMPUTER APPLICATION

SESSION-2025-26

DIPLOMA IN COMPUTER APPLICATION

Program Duration :- 1 year 2 Semester (06 month each)

Prerequisite :- Aspirants should be 10+2 in any stream.

Course Objective :-

- This Course provides basic Knowledge and skills of computer so that they can work easily in many areas.
- Helps in learning practical knowledge by use of different programming language.
- To provide jobs in IT Field.
- Helps in developing basic computer skills in student.

Course Outcomes :-

- Students will be able to understand computers, its basic components and its application.
- They will develop skills for evolving job roles in the IT industry.
- Student will able to learn the latest trends in various subjects of computers & information technology.

DCA101
Essential of Information Technology and OS

1. Introduction to Computers

Computer System Characteristics and Capabilities :Speed, Accuracy, Reliability, Memory capability, Repeatability. *Computer Hardware and Software,* Block Diagram of a Computer. *Types of Computers:* Analog, Digital, Hybrid General and Special Purpose Computers. *Computer Generations:* Characteristics of Computer Generations Computer Systems – Micros, Minis & Main-frames. *Introduction to a PC* :The IBM Personal Computer Types of PC systems PC, XT & AT Pentium PC"s.

2. Computer Organization

Introduction to Input Devices : Keyboard, Direct Entry – Card Readers, Scanning Devices – O.M.R., Character Readers, MICR, Voice Input Devices, Pointing Devices – Mouse, Light Pen. *Storage Devices* :Storage Fundamentals-Bits, Bytes, Primary Storage – RAM,ROM, Secondary Storage-Floppy Disks, Hard Disks, Optical Disks, CD/DVD. *Computer Output* : Output Fundamentals, Hardcopy Output Devices, Impact Printers, Non-Impact Printers, Plotters, Computer output, Softcopy Output Devices, Cathode Ray Tube, Flat Screen Technologies.

3. Operating System

MS-DOS - Introduction, History and Versions of DOS. Booting Process, System Files and Command.com, Internal DOS Commands - DIR, MD, CD, COPY, DEL, REN, VOL, DATE, TIME, CLS, PATH, TYPE. Files & Directories, Elementary External DOS Commands - CHKDSK, MEM, XCOPY, PRINT, DISKCOPY, DISKCOMP, DOSKEY, HELP, TREE, SYS, LABEL, ATTRIB, Creating a Batch Files, Additional Commands -
ECHO, PROMPT, MODE, EDIT, FORMAT, FDISK,BACKUP, RESTORE, MORE, SORT.

4. Windows

Windows Concepts, Features, Structures, Desktop, Taskbar, Start Menu, My Computer, Recycle Bin. Accessories : Calculator, Notepad, Paint, Wordpad, Character Map. Explorer : Creating folders and other Explorer facilities, Internet Explorer basics, navigating the Web, Control Panel.

5. Linux

Open Source Software concept and evolution of Linux, Features of Linux OS, Structure of Linux OS, File System, Directory Structure, Linux editors & Editor commands, Linux commands cd, md, rm, mv, ls, cat, find, grep.

Books

1. Using IT : Williams T M Hill
2. IT : Curtin T M Hill
3. Fundamental of Information Technology : Chetan Shrivastava_Kalyani Publishers.
4 Computer Fundamentals : P.K Sinha BPB Pubications

DCA102
ESSENTIALS OF OFFICE AUTOMATION

1. **MS-Word-** Creating and editing word documents, formatting documents – aligning documents, indenting paragraphs, changing margin, formatting pages, formatting paragraph, printing labels, working with tables, formatting text in tables, inserting and deleting cells, rows and columns, use bulleted and numbering, checking spelling and grammar, finding synonyms, working with long documents, working with header and footer, adding page number and foot note, working with graphics, inserting clip art, working with pictures, Word art, creating chart & Graphs, creating flowcharts, working with mail merge, writing the form letter, merging form documents, merging to label, Working with Mailing lists and Data Sources, selecting merge records, creating macros, running macro.

2. Working with MS-Excel – Introducing Excel, use of excel sheet, saving, opening and printing workbook ,Apply formats in cell & text, Divide worksheet into pages , setting page layout, adding Header & Footer. Using multiple documents, arranging windows i.e. (Cascade, Tiled , Split), protecting your work, password protection. Working with Functions & Formulas, using absolute reference, referencing cell by name , using cell label , giving name to cell and ranges , working with formulas (mathematical & trigonometric , statistical, date time , most recently used), Working with Excel graphics, creating chart & graphs. Working with lists & database, sorting a database, filtering a database ,using auto filter ,criteria range, calculating total and subtotal, creating pivot table, goal seek, recording & playing macros, deleting and selecting macro location.

3. Presenting with PowerPoint – Creating presentation, working with slides, different types of slides, setting page layout, selecting background and applying design, adding graphics to slide, adding sound and movie, working with table, creating chart and graph, playing a slide show, slide transition, advancing slides, setting time, rehearsing timing, animating slide, animating objects, running the show from windows.

4. Introduction of DBMS through MS-Access – Introduction to Database, DBMS, RDBMS, Features of Access, Designing Database, Relationship (One to One, One to many, Many to Many), Create table (Design View, Wizard, Datasheet View), Query (Update Query, Delete Query, Selection Query, Cross table Query, Make table Query).

5. Introduction to TALLY

Accounting, Accounting Conventions (Single and Double Entry), Transactions, Types of Accounts, Personal Accounts, Real, Nominal, Rules of Accounting. Introduction to Accounting Software [Ex. TALLY] – Creating of Company, Ledgers& Groups. Voucher Entry; Types of Voucher, Capital and Revenue, Income, Expenditure, Receipts, Preparation of Trial Balance, Profit & Loss Account & Balance Sheet.

Suggested Books :

1. The Big Basics Book Of MS-OFFICE : Fulton, et al.

DCA103
PROGRAMMING IN 'C'

Unit 1 - Introduction to C programming structure and C compiler, Data representation : Simple data types like real integer, character etc. Program, statements and Header Files, Simple Input Output statements in C, Running simple C programs. Primitive data types in C, char, integer, float, Double Long, Double Void etc.

Unit 2- Operators and Expressions – Arithmetic Operators, Assignment Operators, increment and decrement operator, relational and Boolean operators, Mixing of Different data types and operators for forming expressions.

Unit 3- Control Structure: If - statement, If -else statement, Multiway decision, Compound Statement, Loops: For - loop, While -loop, Do-While loop, Break statement, Switch statement, Continue statement, Go to statement. Arrays, Strings, Multidimensional Arrays, Strings, Array of Strings.

Unit 4- Functions : Function main , Functions accepting more than one parameter, User defined and library functions, Concept associatively with functions, function parameter, Return value, recursion function, Structure and Union, Declaring and using Structure, Structure initialization, Structure within Structure, Operations on Structures, Array of Structure, Array within Structure.

Unit 5 Pointers: Definition and use of pointer, address operator, pointer variable, referencing pointer, void pointers, pointer arithmetic, pointer to pointer, pointer and arrays, passing arrays to functions, pointer and functions, accessing array inside functions, pointers and two dimensional arrays, array of pointers, pointers constants, pointer and strings.

TEXT BOOKS :-

1. Let us C - Yashwant Kanitkar.
2. Mastering in C - Venugopal
3. Shaum"s Series

DCA104 : Practical based on DCA102 & DCA103

1 Scheme of Examination:-

Practical examination will be two programs and a project demonstration. It will be of 3 hours duration. All programme with flowchart & algorithms. The distribution of practical marks will be as follows and

Programme 1 (Word / Power point / Tally) - 10
Programme 2 (Excel / Access) - 10
Programme 3 (C Program) - 20
Programme 4 (C Program) - 20
Viva - 25
[Practical Copy + Internal Record] - 15
Total - **100**

2 Practical file should contain printed programs with name of author, date, path of program, unit no. and printed output.

3 In every program there should be comment for each coded line or block of code.

4 All the following programs or a similar type of programs should be prepared.

List of Practical
INPUT AND OUTPUT, FORMATTING

1. Write a program in which you declare variable of all data types supported by C language. Get input from user and print the value of each variable with alignment left, right and column width 10. For real numbers print their values with two digits right to the decimal.

LOOPS, DECISIONS

2. Write program to print all combination of 1 2 3.
3. Write program to generate following pattern

a)
```
A B C D E F G
 A B C E F G
A B F G
A G
```

b)
```
1
 1 2
1 2 3
```

c)
```
*
 * *
* * *
```

d)
```
1
1 2 1
1 3 3 1
1 4 6 4 1
```

4. Write main function using switch…case, if..else and loops which when called asks pattern type; if user enters 11 then first pattern is generated using for loop. If user enters 12 then first pattern is generated using while loop. If user enters 13 then first pattern is generated using do-while loop. If user enters 21 then a second pattern is generated using for loop and so on.

5. Write program to display number 1 to 10 in octal, decimal and hexadecimal system.

6. Write program to display number from one number system to another number system. The program must ask for the number system in which you will input integer value then the program must ask the number system in which you will want output of the input number after that you have to input the number in specified number system and program will give the output according to number system for output you mentioned.

7. Write a program to perform following tasks using switch…case, loops, and conditional operator (as and when necessary).
   a) Find factorial of a number
   b) Print Fibonacci series up to n terms and its sum.
   e) Print prime numbers up n terms.
   f) Print whether a given year is leap or not.

ARRAY

8. Create a single program to perform following tasks using switch, if..else, loop and single dimension character array without using library function: a) To reverse the string.
b) To count the number of characters in string.
c) To copy the one string to other string;
d) To find whether a given string is palindrome or not.
e) To count no. of vowels, consonants in each word of a sentence and no. of punctuation in sentence.
f) To arrange the alphabets of a string in ascending order.

9. Create a single program to perform following tasks using switch, if..else, loop and single dimension integer array:
a) Sort the elements.

10.Write a program that read the afternoon day temperature for each day of the month and then report the month average temperature as well as the days on which hottest and coolest days occurred.

11.Create a single program to perform following tasks using switch, if..else, loop and double dimension integer array of size 3x3:

a) Addition of two matrix.
b) Subtraction of two matrix.
c) Multiplication of two matrix.

12.Create a single program to perform following tasks using switch, if..else, loop and double dimension character array of size 5x40:

a) Sorting of string.
b) Finding the largest string.
c) Finding the smallest string.

FUNCTIONS

13.Write program using the function power (a, b) to calculate the value of a raised to b.

14.Write a program to perform following tasks using switch…case, loops and function.

a) Find factorial of a number
b) Print Fibonacci series up to n terms and its sum.

15.Write a program to perform following tasks using switch…case, loops and **recursive**function.

a) Find factorial of a number
b) Print Fibonacci series up to n terms and its sum.

16.Write a function to accept 10 characters and display whether each input character is digit, uppercase letter or lower case letter.

STRUCTURE

17. Create a structure Student having data members to store roll number, name of student, name of three subjects, max marks, min marks, obtained marks. Declare a structure variable of student. Provide facilities to input data in data members and display result of student.

18. Create a structure Date with data member"s dd, mm, yy (to store date). Create another structure Employee with data members to hold name of employee, employee id and date of joining (date of joining will be hold by variable of structure Date which appears as data member in Employee Structure). Store data of an employee and print the same.

19. Create a structure Student having data members to store roll number, name of student, name of three subjects, max marks, min marks, obtained marks. Declare array of structure to hold data of 3 students. Provide facilities to display result of all students. Provide facility to display result of specific student whose roll number is given.

POINTER

20. Write a program of swapping two numbers and demonstrates call by value and call by reference.
21. Write a program in c using pointer and function to receive a string and a character as argument and return the no. of occurrences of this character in the string.
22. Write program to find biggest number among three numbers using pointer and function.

List of Practical

MS- WORD

File New, Open, Save, Cut, Copy, Paste, Drag Drop, Bullets and Numbering, Undo, Redo, Find, Replace, Paragraph Formatting, Character Formatting and Page Formatting.

1. Open a document. Type the following text and perform the tasks as instructed below:-

Working with Word Processor

As already mentioned, a word processor is a package that processes textual matter and creates organized and flawless documents. In addition to it a word processor not only remote all the limitations of typewriter but also offers various useful features that cannot be even dreamt of with typewriter.

Also if same textual matter is to be reproduced with minor changes, retyping the only option in typewriters.

The word processing (and word processor) originated way back in 1964 when special typewriters. Magnetic Tape Selectric typewriters (MIST) were launched by IBM (International Business Machines).

1. Insert the following text after the first paragraph

The main components of a word processing system are listed below: ·

Computer

· Printer

· A word processing software

2. Save the document as Word1.doc
3. Move the second paragraph to the end of the document. Using darg& drop.
4. Move the second paragraph in the end of the document using cut, paste operations.
5. Undo the above actions.
6. Now use Redo actions
7. Go to the End of the document (in one step)
8. Go to the Beginning of document (in one step)
9. Insert page break before the third paragraph.
10. Search the word "computer: in your document with options Match case, find whole words only.
11. Replace the word "typewriters" with "word processor"
12. Undo the above action
13. Remove All page breaks from your document
14. Change the magnification of your document to different percentages using zoom features.
15. Format the above written paragraphs and give the options as follows:
    (1) Alignment justified
    (2) Indentation: left 0.2 right:0.2
    (3) Spacing: before 6 pt. after:6 pt.
    (4) Special: first line by :0.4"
    (5) Line spacing 1.5 lines.
16. Set the default tab stop to 0.3"
17. Set the margins to 1.25
18. Format the page using
    1. Left margin:0.5, right margin: 0.5
    2. Top margin:1.5, bottom margin:0.5
    3. Gutter Margin: 1indentation: left 0.2 right:0.2
    4. Header Margin:0.5

19. Format the each occurrence of group of words „Word Processor" as bold, italic, under line and small caps using find and replace with formatting options.

20. Align the heading to Centre and make it bold, underlined and italicized.

File New, Open, Save, Find, Replace, Paragraph Formatting, Character Formatting and Page Formatting.

21. Type the text as show below and perform the tasks as directed:

Computers
COMPUTER is an electronic device that processes data and gives meaningful information.
Computers are being used in almost all the fields today EXPERT SYSTEMS
HUMAN THINKING AND ARTIFICAL INTELLIGENCE
Can computer think?
AI at work Today: Natural Language programs and Expert Systems. THE
IMPACT OF COMPUTERS ON PEOPLE
The Positive Impact
The Potential Dangers
THE IMPACT OF COMPUTERS ON ORGANIZATIONS
The information Processing Industry
The Positive impact on Using Organizations
The Potential Dangers for Using Organizations

1. Search for the word „Computer" in the entire document. All the occurrences of the given word are to be searched irrespective of the case.
2. In the above question note that word also searches „computerization and „computerisations". Now make sure that this time Word searches only for the word „computer" in the entire document.
3. Change the entire uppercase letter to lowercase.
4. Give a heading to the above written text „COMPUTERS IN TODAY"S WORLD"
5. Centre aligns the Heading text Computer that appears in first line. 6. Apply outside border to entire document.
7. Apply outside border to the just heading text.
8. Change page setup according to the following specifications Top margin: 1.5", bottom margin: 1.5"
   Gutter: 1", left margin: 1.5"
   Right margin: 1"
   Page width: 7.5", page height: 6.5 "
   Orientation: portrait
9. Give a header „Creations" and footer „The school of computing". The footer should also consist of page no"s.
10. Give appropriate commands for giving different header and footers for first page and odd & even pages.
11. Save and close the document.

3. Write the following equations in MS-Word:
4H3PO3=3H3PO4+PH3 , PCL3+CL2=PCL5, (x+y)2=x2+y2+2xy

4. Write the following equations in MS-Word:
C2H5OH+PCL5=C2H5CL+POCL3+HCL, , a ÷ b ≠ 0

5. Write the following in MS-Word:
    1. Preheat the oven to 220°C.
    2. Copyright ©
    3. Registered ®
    4. Trademark ™

6. Create the following table in MS-Word:

Name Rahul
Roll No. 101

Subject	**Max**	**Min**	**Obtain**
Java	100	33	75
Multimedia	100	33	70

II Semester

DCA 105
Basic of Python Programming

Unit 1 : Introduction to Python :- Installing Python, basic syntax, interactive shell, editingsaving and running a script; The concept of data types, variables, assignments; immutable variables; numerical types, operators(Arithmetic Operator, Relational Operator, Logical or Boolean Operator, Assignment Operator, Ternary Operator, Bitwise Operator, Increment or Decrement Operator) and expressions; comments in the program, understanding error messages.

Unit-2:- Creating Python Programs: - Input and Output Statements, Control Statements(Branching, Looping, Conditional Statement, Exit function, Difference between break,continue and pass).Function: Defining a function, calling a function, types of function, Function Arguments,Anonymous Functions, global and local variables, Recursion

Unit-3:- Strings and Text Files: - Manipulating files and directories, os and sys modules, text files: reading/writing text and numbers from/to a file, creating and deleting a formatted file(csv or tab-separated).String Manipulations: subscript operator, indexing, slicing a string; strings and number system: converting string to numbers and vice-versa, Binary, octal and hexadecimal numbers.

Unit-4 :- Lists, Tuples and Dictionaries :- Basic list operators, replacing, inserting and removing an element, searching and sorting lists, Accessing tuples, Operations, Working Functions and Methods, dictionary literals, Adding and Removing keys, accessing and replacing values, traversing dictionaries.Data Structures using Lists: Elementary Data Representation-Linear List Array, Stacks, Queues, Linked Lists, and Trees.

Unit-5:- Modules: - Importing module, Math module, Random Module, packages, Composition, Exception Handling: Exception, Exception Handling, except clause, try, finallyclause, User-Defined Exceptions.

TEXT REFERENCE BOOKS:

1. T. Budd, Exploring Python, TMH, 1st Ed, 2011
2. Allen Downey, Jeffrey Elkner, Chris Meyers, How to think like a computer scientist:

DCA 106
E- Commerce

Unit – I : Introduction to Electronic Commerce –The scope of E-commerce; Size, growth and future projection of E-commerce market Worldwide and in India; Internet and its impact on traditional businesses; Definition of E-commerce; Business models in E –Commerce environment; Case studies.

Unit – II : Emergence of E-commerce - E-commerce on private networks, Electronic Data Interchange (EDI), What is EDI, EDI in action, EDI basics, EDI standards, financial EDI, FEDI for international trade transaction, FEDI payment system within the US, ACH credit transfer payment system FEDI, application of EDI, benefits of EDI, Electronics Payment system, E-commerce on the web, E-commerce in India,

Unit – III : Internet, Security and E-Commerce: Security of Data/Information in Internet/web environment; Client security, Network security; Virus protection and Hacking; Security Measures: Authentication, Integrity, Privacy, Non-repudiation; Public information, Private information, firewall tunnels, encryption, secret key encryption, public key encryption, digital signature.

Unit – IV: E-commerce Payment Systems – E-Commerce Payment Models: Pure and Hybrid E-Commerce Payment Models; Credit Card; Debit Cards; Pre-paid Card; Online debit to the accounts; and Alternative Payment Systems employing Electronic Clearing System of Reserve Bank of India.

Unit – V : Types of E-commerce Business–to-Business (B2B), Business-to-Consumer (B2C); Business-to-Business-to-Consumer (B2B2C) and Consumer-to-Consumer (C2C) E-Commerce , Inter organizational transaction; Business transaction cycle, different types of transactions in E-commerce environment; Electronic markets, advantages and disadvantages of E-Market, Future of E-Markets; Inter- Organizational E-Commerce transactions; Advantages and Disadvantages of Inter-Organizational E-Commerce.

Recommend Books –

1. Business on the net - by Kamlesh N. Agarawala , Amit Lal & Deeksha Agarawal (Macmillan India Ltd.).

DCA 107

HTML & Internet Applications

1. **HTML Basics & Web Site Design Principles** – Concept of a Web Site, Web Standards, What is HTML? HTML Versions, Naming Scheme for HTML Documents , HTMLdocument/file, HTML Editor , Explanation of the Structure of the homepage , Elements in HTML Documents ,HTML Tags, Basic HTML Tags, Comment tag in HTML, Viewing the Source of a web page, How to download the web page source? XHTML, CSS, Extensible Markup Language (XML), Extensible Style sheet language (XSL), HTML Document Structure. HTML Document Structure-Head Section, Illustration of Document Structure,<BASE> Element,<ISINDEX> Element,<LINK> Element ,META ,<TITLE> Element,<SCRIPT> Element ,Practical Applications.

2. ***HTML Document Structure-Body Section*** - Body elements and its attributes: Background;BackgroundColor; Text; Link; Active Link (ALINK); Visited Link (VLINK); Left margin; Top margin ,Organization of Elements in the BODY of the document: Text Block Elements; Text Emphasis Elements; Special Elements -- Hypertext Anchors; Character-Level Elements; Character References ,Text Block Elements: HR (Horizontal Line); Hn (Headings) ; P (Paragraph); Lists; ADDRESS ; BLOCKQUOTE; TABLE; DIV (HTML 3.2 and up) ; PRE (Preformatted); FORM ,Text Emphasis Elements, Special Elements -- Hypertext Anchors ,Character-Level Elements: line breaks (BR) and Images (IMG),Lists ,ADDRESS Element, BLOCKQUOTE Element, TABLE Element ,COMMENTS in HTML ,CHARACTER Emphasis Modes, Logical & Physical Styles , Netscape, Microsoft and Advanced Standard Elements List, FONT, BASEFONT and CENTER.

3. **Image, Internal and External Linking between WebPages** - Netscape, Microsoft and AdvancedStandard Elements List, FONT, BASEFONT and CENTER Insertion of images using the element IMG (Attributes: SRC (Source), WIDTH, HEIGHT, ALT (Alternative), ALIGN),IMG (In-line Images) Element and Attributes; Illustrations of IMG Alignment, Image as Hypertext Anchor, Internal and External Linking between Web Pages Hypertext Anchors ,HREF in Anchors ,Links to a Particular Place in a Document ,NAME attribute in an Anchor ,Targeting NAME Anchors ,TITLE attribute, Practical IT Application. Designing web pages links with each other, Designing Frames in HTML. Practical examples.

4. **Creating Business Websites with Dynamic Web Pages** – Concept of static web pages anddynamic web pages, Introduction to scripting, Types of Scripting languages, Scripting Files, Client Side Scripting with VB/Jscript/JavaScript, Practical examples of Client side scripting. Identifying Objects & Events, and Creating & Implementing Common Methods,. Hosting & promotion of the web site, Domain Name Registration, Web Space allocation , Uploading / Downloading the website- FTP, cute FTP. Web Site Promotion Search Engines, Banner Advertisements.

5. **Internet** - Technical foundation of Internet, Internet Service Provider, Anatomy of Internet,ARPANET and Internet History of World Wide Web, Services Available on Internet; Basic Internet Terminologies. Client server computing, Distributed Computing, Domain naming system, DNS Server, Internet Security, Internet Applications.

Recommend Books –

1. Business on the net - by Kamlesh N. Agarawala, Amit Lal & Deeksha Agarawal
2. Introduction to HTML by Kamlesh N. Agarwala, O.P.Vyas, Prateek A. Agarwala.
3.. ASP Developer's Guide – by Greg Buczek (TATA McGraw Hill).
4. Information Technology Act 2000: www.mit.gov.in/it-bill.html

DCA 108 : Practical based on Paper-I & Paper-III

1 Scheme of Examination:-

Practical examination will be of 3 hours duration. The distribution of practical marks will be as follows

Programme 1 (Python)	-	10
Programme 2 (Python)	-	20
Programme 1 (HTML)	-	10
Programme 2 (HTML)	-	20
Viva	-	25
[Practical Copy + Internal Record]	-	15
Total	-	**100**

2 In every program there should be comment for each coded line or block of code **3** Practical file should contain printed programs with name of author, date, path of program, unit no. and printed output.

4 All the following programs or a similar type of programs should be prepared

List of Practical of Python Programming

1. Write a program that reads an integer value and prints —leap year or —not a leap year.
2. Write a program that takes a positive integer a and then produces n lines of output shown as follows.
3. Write a program to create the following Pattern
   For example enter a size: 5 -
   *
   **
   **
   ****
   *****
4. Write a function that takes an integer n as input and calculates the value of 1 + 1/1! + 1/2! + 1/n!
5. Write a function that takes an integer input and calculates the factorial of that number,
6. Write a function that takes a string input and checks if it is a palindrome or not.
7. Write a list function to convert a string into a list, as in list (-abc) gives [a, b, c].
8. Write a program to generate Fibonacci series.
9. Write a program to check whether the input number is even or odd.
10. Write a program to compare three numbers and print the largest one.
11. Write a program to print factors of a given number.
12. Write a method to calculate GCD of two numbers.
13. Write a program to create Stack Class and implement all its methods, (Use Lists).
14. Write a program to create Queue Class and implement all its methods, (Use Lists)
15. Write a program to implement linear and binary search on lists,
16. Write a program to sort a list using insertion sort and bubble sort and selection sort.

Note: List of experiments may be changed by the concerned teacher.

HTML LIST OF PRACTICALS

Q.1. Write an HTML program to create the following table:

Class	Subject1	Subject2	Subject3
BCA I	Visual Basic	PC Software	Electronics
BCA II	C++	DBMS	English
BCA III	Java	Multimedia	CSA

Q.2. Write an HTML program to create the following lists:

- C
- C++
- Fortran
- COBOL

Q.3. Write an HTML program to create the following lists:

1. Java
2. Visual Basic
3. BASIC
4. COBOL

Q.4. Write an HTML program to demonstrate hyperlinking between two web pages. Create a marquee and also insert an image in the page.

Q.5. Write an HTML program to create frames in HTML with 3 columns (Width = 30%, 30% , 40%).

Q.6. Write an HTML program to create a web page with a blue background and the following text:

New Delhi

New Delhi, the capital and the third largest city of India is a fusion of the ancient and the modern. The refrains of the Muslim dynasties with its architectural delights, give the majestic ambience of the bygone era.

Q.7. Write an HTML program to create the following table:

Course	OC	BC	MBC	SC/ST	TOTAL
Computer science	9	18	5	5	37
Commerce	14	25	6	5	50
Grand total					87

Q.8. Write an HTML program to create the following table:

Car Price List

Maruti		Tata		Ford	
Model	Price	Model	Price	Model	Price
Maruti 800	2 Lac	Sumo	2 Lac	Ikon	5 Lac
Omni	3 Lac	Scorpio	3 Lac	Gen	2 Lac

Q.9. Write an HTML program to create the following table:

Q.10. Write an HTML program to create the following table:

Students Records

Name	Subject	Marks
Arun	Java	70
	C	80
Ashish	Java	75
	C	69

Q.11. Create an HTML document and embed a flash movie in it.

Q.12. Write the HTML coding to display the following table. Also insert an image in the web page.

Subject	Max	Min	Obtain
Java	100	33	75
Multimedia	100	33	70
Operating System	100	33	68
C++	100	33	73

Q.13. Write the HTML coding to display the following table:

Name		Rahul	
Roll No.		101	
Subject	Max	Min	Obtain
Java	100	33	75
Multimedia	100	33	70

Q.14. Write an HTML program to create a form as the following:

Enter Name: _____

Enter Roll No.: _____

Enter Age: _____

Enter DOB: _____

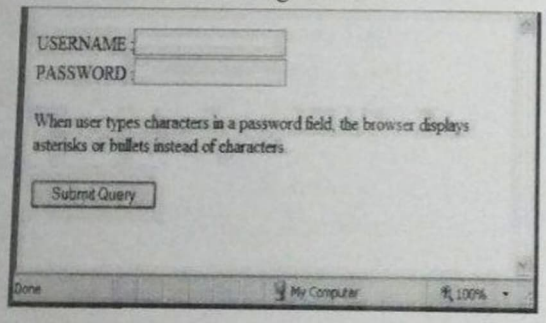
Q.15. Write an HTML program to create a web page with an image as background and the following text:

New Delhi

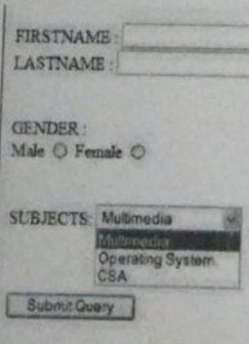
New Delhi, the capital and the third largest city of India is a fusion of the ancient and the modern. The refrains of the Muslim dynasties with its architectural delights, give the majestic ambience of the bygone era.

On the other side New Delhi, the imperial city built by British, reflect the fast paced present. The most fascinating of all is the character of Delhi which varies from the 13th present century mausoleum of the Lodi kings to ultra modern glass skyscrapers.

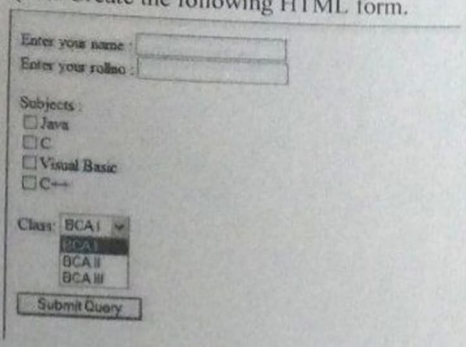
Q.16. Create the following HTML form.



Q.17. Create the following HTML form.



Q.18. Create the following HTML form.



Q.19. Write the HTML coding for the following equations: $C_2H_5OH+PCL_5=C_2H_5CL+POCL_3+HCL$ $4H_3PO_3=3H_3PO_4+PH_3$ $PCL_3+CL_2=PCL_5$

Q.20. Write the HTML code to display the following:

- Actors
  - Bruce Willis
  - Gerard Butler
  - Vin Diesel
  - Bradd Pitt

- Actress
  - Julia Roberts
  - Angelina Jolie
  - Kate Winslet
  - Cameron Diaz

Q.21. Write the HTML code to display the following:

1. Cricket Players
   A. Batsman
      i. Sachin Tendulkar
      ii. Rahul Dravid
      iii. Virendra Sehwag
   B. Bowler
      i. Kumble
      ii. Zaheer Khan
      iii. Balaji
   C. Spinner
      i. Harbhajan
      ii. Kumble
      iii. Kartik