Pt. Ravishankar Shukla University, Raipur (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 seperately. 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 Science). 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. The admission will be done on the basis of Entrance Test. Admission to Maximum 10% of total seats may be given to eligible candidate(s) under NRI/NRI-Sponsored /Industry/Organization Sponsored category. Entrance Test will not be required for the candidates under this category.

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 the Board of Studies in Computer Science of Pt. Ravishankr Shukla University, Raipur and subject to alteration by the Board of Studies.

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PT. RAVISHANKAR SHUKLA UNIVERSITY: RAIPUR (C.G.)
SCHOOL OF STUDIES IN COMPUTER SCIENCE

DIPLOMA IN COMPUTER APPLICATION, 2014-2015
[DURATION - ONE YEAR - PART TIME]

6. The duration of the course shall be one year consisting of two semesters. There shall be three theory and one practical course in the each semester. There shall be grading system of awards.

FIRST SEMESTER: **DCA101**   **: Essential of Information Technology and OS**
                                     DCA102   **: Essentials of Office Automation.**
                                     DCA103   **: Programming in 'C' Language**
                                     DCA104   **: Practical based on DCA102 & DCA103.**

DCA101
Essential of Information Technology and OS

I. 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
5. Working with UNIX   : Vijay Mukhi [BPB]

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.
   Introsuction 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, Goto 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 / Powerpoint / 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        c)           *
   A B C   E F G                  *   *
   A B       F G              *   *   *
   A           G
b) 1                     d)           1
   1 2                              1 2 1
   1 2 3                            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 Center 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
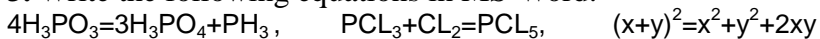
THE IMPACT OF COMPUTERS ON ORGANIZATIONS
The information Processing Industry
The Positive impact on Using Organizations
The Potential Dangers for Using Organizations

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:
$4H_3PO_3 = 3H_3PO_4 + PH_3$, $PCL_3 + CL_2 = PCL_5$, $(x+y)^2 = x^2 + y^2 + 2xy$

4. Write the following equations in MS-Word:
$C_2H_5OH + PCL_5 = C_2H_5CL + POCL_3 + HCL$, $A = \pi r^2$, $a \div b \neq 0$

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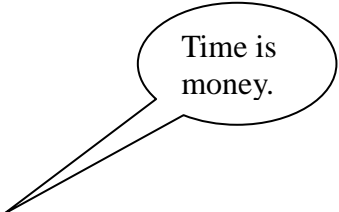
Name		Rahul	
Roll No.		101	
Subject	Max	Min	Obtain
Java	100	33	75
Multimedia	100	33	70

7. Create a document in MS-Word. Set the watermark as **Microsoft**. Also write the following text as formatted below:

 easuring programming progress by lines of code is like measuring aircraft building progress by weight.
        --Bill Gates

8. Create the following:

Time is money.

9. Create the following:

Computers

Multimedia
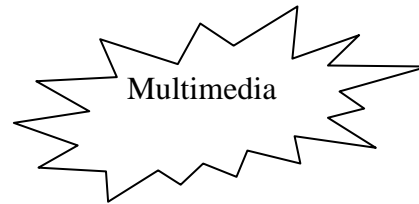
10. Create the following table in MS-Word:

Admission 2012-2013

Course	OC	OB	MBC	SC/ST	Total
Computer Science	9	18	5	5	37
Commerce	14	25	6	5	50
Mathematics	12	20	4	4	40

11. Create Table as shown

Car		Price
Maruti	Omni Van	200000
	Maruti 800	242000
Tata	Sumo	390000
	Sierra	447000

12. Insert the following in MS-Word.

Welcome

PC
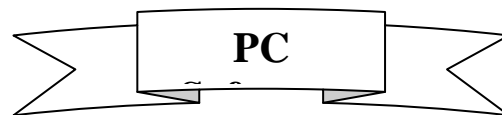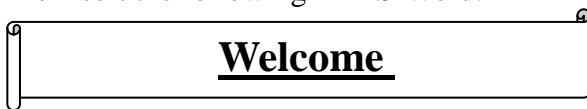
13. Insert the following in MS-Word.

Rabbit
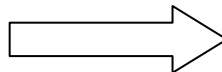
14. Write the following in MS-Word.
  ➢ This is sentencecase.
  ➢ this is lowercase.
  ➢ THIS IS UPPERCASE.
  ➢ This Is Capitalise Each Word.
  ➢ tHIS IS tOGGLE cASE.

15. Create the following list in MS-Word:
  • Actors
    o Bruce Willis
    o Gerard Butler
    o Vin Diesel
  • Actress
    o Julia Roberts

o Angelina Jolie
o Kate Winslet
o Cameron Diaz

16. Write the following in MS-Word:
1. Cricket Players
    A. Batsman
        i. Sachin Tendulkar
        ii. Rahul Dravid
        iii. Virendra Sehwag
    B. Bowler
        a. Kumble
        b. Zaheer Khan
        c. Balaji
    C. Spinner
        a) Harbhajan
        b) Kumble
        c) Kartik

17. Write a letter to send invitation to your friend inviting on your birthday.

18. Create labels for your friends' address.

MS – EXCEL

1. Create the following worksheet and save the worksheet as wages.xls

PACE COMPUTERS (ATC CEDT), Govt. of India
Payroll for Employee (Temporary)

| Today's date | | | Pay Rate : |

Worker's Name	Hired On	days Worked	Gross Wages
Kushagra	3-Mar-07		
Pradeep	4-Mar-07		
Puneet	5-Mar-07		
Rajeev	6-Mar-07		

(I) Calculate days work and gross wages

2. Create the following worksheet and save the worksheet as wages.xls

Name Basic (monthly) (Rs.)	HRA(% of basic)	DA (Rs.)	Total Salary (1997)	Bonus (Rs)	Total Salary (1998)	% (Increase)
Shirome5000	10	450		1200		
Somya9000	15	800		200		
Tanya7000	12	900		1800		

i. Calculate the total salary as sum of Basic salary, HRA ,DA, for each employee for 1997
ii. Calculate total salary for year 1998 as sum of salary of 1997 and bonus
iii. Calculate % increase in salary from 1997 to 1998

3. Create a worksheet as follows

Pace computer (ATC CEDT) Govt. Of India
Payroll for employee (Permanent)

Empcode	name	doj	salary	bonus	net salary

E001	Meenu	3-Mar-95	5000		
E002	Manoj	4-Mar-06	4000		
E003	Preeti	3-Mar-95	4800		
E004	Sumita	6-Mar-07	7500		

i. allow bonus 8000 to employee having service >2 year other vise allow bonus 3000
ii. find net salary as sum of bonus and salary

4. create the worksheet as follows

Roll No	Name	English	Maths	Total	Average	Division
101	Kushagra	95	99			
102	Ajay	92	95			
103	Vijay	70	69			
			Class Average			

i. find Total of two subject for each student
ii. find average of two subject for each student
iii. find class as average of average column
iv. find division of student as first, second, third, assume percentage of division of your own and maximum marks in each student as 100
v. Apply conditional formatting for division column, first division should be in bold, second division should be in italic and third division should be underline

1. Create macro in excel to make selected cell, bold, italic outside bordered and center across select

2. create bar chart with given data

	2001	2002	2003
Tea	19	23	25
Coffee	22	24	22
Sugar	45	40	45

i. Provide heading production detail
ii. Provide z axis title; lacks metric tone
iii. Provide x axis title year

3. Create a table with column heading as shown below and using form perform data entry of records.

Zone	Department	Employee	Salary
West	Marketing	Mukesh	10500
East	Sales	Rahul	20000
South	Marketing	Suresh	5500
North	Marketing	Anju	25000
South	Sales	Neeraj	8000
North	Sales	Ajay	8000
South	Marketing	Mahesh	7500
West	Sales	Rajesh	4500

i. Sort the data according to Zone then by Department
ii. Use group and outline feature to show & hide details

8. Create a table with column heading as shown below and using form perform data entry of records.

Zone	Department	Employee	Salary
West	Marketing	Mukesh	10500
East	Sales	Rahul	20000
South	Marketing	Suresh	5500
North	Marketing	Anju	25000
South	Sales	Neeraj	8000
North	Sales	Ajay	8000
South	Marketing	Mahesh	7500
West	Sales	Rajesh	4500

i. Use filter command to show records having zone: West

ii.   Use filter command to show records having zone: West and salary less than 5000
iii.   Use filter command to show records having salary greater than 10000

9. Create pivot table using Data of exercise 8

1. Suppose a database exists in ms-access you are required to import the data. How will you?

11. Create a able using feature
Principle   1500
Rate   4%
Time   5

300	3	4	5
1%	45	60	75
2%	90	120	150
3%	135	180	225

12. Using goal seek feature find out the interest rate it must be to earn interest 500
Principle   1500
Rate   4%
Time   5
Interest 300

MS-Access

Q.1. Create the following table in MS-Access:

Field Name	Data Type	Description
ContactID	AutoNumber	Primary Key
ContactType	Text 50	Type of contact (Wholesale, dealer, other)
Name	Text 50	Contact's first name
Company	Text 50	The Contact's employer
Address	Text 50	Contact's address
City	Text 50	Contact's city
State	Text 50	Contact's state
ZipCode	Text 50	Contact's zip code
Phone	Text 50	Contact's phone
Fax	Text 50	Contact's fax
E-Mail	Text 100	Contact's e-mail address
LastSalesDate	Date/Time	The most recent date the contact purchased something
DiscountPercent	Number	The customary discount provided to the customer
Notes	Memo	Notes and observations regarding this customer
Active	Yes/No	Whether the customer is still buying or selling products

Q.2. Create the following tables in MS-Access with the refential integrity-foreign key:
1. tblProducts
Primary Key - ProductID

ProductID	Description	Category	Quantity	Cost	RetailPrice	ProductNumber	SalePrice	Taxable

2. tblSalesLineItems
Primary Key - SalesLineItemID

SalesLineItemID	InvoiceNumber	ProductID	ProductNumber	Quantity	Description	Price	Discount

3. tblSales
Primary Key – InvoiceNumber

InvoiceNumber	SaleDate	InvoiceDate	Buyer	PaymentMethod	TaxLocation	TaxRate

MS PowerPoint

Q 1 Create a PPT of Atleast 10 Slides with one slide for comparison, one slide displaying a chart with the table.

Q 2 Create a PPT presentation use rehearse timing for the slide show

Q 3 Create PPT presentation slide import sound and video clips.

Q 4 Create PPT presentation with hyperlinking.

Q 5 Create PPT presentation and apply themes and transitions.

Tally

Preparing Balance Sheet for various companies.

Second Semester -   DCA105   : GUI - Programming in Visual Basic.
                        DCA106   : E- Commerce
                        DCA107   : HTML & Internet Applications.
                        DCA108   : Practical based on DCA105 & DCA107.

DCA105
GUI - PROGRAMMING IN VISUAL BASIC

UNIT - I

Introduction to visual Basic: Hardware requirements, features of VB, Editions of Visual Basic, and Event Driven Programming vs procedure oriented programming. Introduction to Integrated Development Enviroment. Basic concepts of Visual Basic programming: Controls, properties, methods, events, forms, projects. Creating Executable files.
Variables, constants, data types, data conversion function., scope of variables Operators

UNIT - II

Control Structure : Conditional / branching statements : If...else..endif, Select case Looping statements: do.. while, for.. next, for each, exiting a loop, goto statement, msgbox and input box functions.

Arrays: types of arrays, array manipulation, Working with standard controls. Working with control array, various key and mouse events, using drag and drop concepts.

UNIT – III
Procedure and Functions: types of function, library function, date and time function, format function, and string related function, validation function. Creating user defined function & procedure, call by value and call by reference, concept of recursion, working with basic module, class module and form module.

UNIT - IV
Working with Advanced Controls: toolbar, status bar, tabbed dialog controls, progress bar, animation controls, dtpicker, calendar, common dialog control.
SDI & MDI Application: creating MDI application, menu editor: defining menu & popup menu, sub main, startup objects. Working with graphics control and using grphic methods.

UNIT- V

Data Access Using the ADO Data Control: Basic concepts of relational database, visual data manager, introduction to SQL, concept of ODBC, Overview of DAO and RDO, Using DAO and RDO to access data. ADO features, difference among ADO, DAO and RDO, accessing and manipulating database using ADO, ADO object hierarchy, concept of recordset and its type, connection object, command object.

BOOKS RECOMMENDED :
   1. Introduction to OOP & V.B. – V.K. Jain (Vikas Publisher]
   2. Data Base Management System - Alexies & Mathews [Vikas publication]
   1. Programming in Visual Basic - G.B. Sahoo & Rita Sahoo BPB Publications.
   2. Programming in VB 6.0- Bradley – TM Hill.

DCA106
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.).

DCA107
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 , HTML document/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), Some tips for designing web pages, 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; Background Color; 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 Advanced Standard 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 and dynamic 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.htm

Online Resources— Indian Case Studies: URL's of some of the websites
India's first e-Commerce B2C e-tailer: www.fabmart.com
India's first online trading netpreneurs www.icicidirect.com
India's first alternative payment alternative: www.billjunction.com
Indian online grocery establishments: www.fabmart.com; www.sangam.com; www.subiksha.com; and www.myfoodworld.com for example.
India bank's offering Internet banking services: www.icicibank.com; www.hdfcbank.com; www.gtb.com , for example.
www.ncsa.uiuc.edu/General/Internet/www.

DCA108   : Practical based on DCA105 & DCA107

1 Scheme of Examination:-
   Practical examination will be of 3 hours duration. The distribution of practical marks will be as follows

Programme 1 (VB)	-	20
Programme 2 (VB)	-	20
Programme 1 (HTML)	-	10
Programme 2 (HTML)	-	10
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 Visual Basic
2. WAP to perform arithmetic operation **using command buttons**. (**Declare variables globally**).
3. WAP to take input of principal, rate & time and calculate simple interest & compound interest.
4. Write a program to take input of x and print table of x in the following format.

   X * 1 = X
   X * 2 = 2X

   X * 10 = 10*X

5. Design an interface, which will appear like marksheet. It will take input of marks in five subjects and calculate total marks and percentage then provide grade according to following criteria. (**Using nested if**)   (Use tab index property to move focus).

If %	Then Grade
> = 90	A+
> = 75 & < 90	A
> = 60 & < 75	B
> = 45 & < 60	C

Otherwise   F

6. WAP to create a simple calculator (**Using control array**)
7. Write a program to check whether an centered no. is prime or not. **(Using for loop & Exit for)**
8. Write a program which will count all vowels, consonants, digits, special characters and blank spaces in a sentences (Using **select case**)
9. WAP to illustrate all functionalities of **listbox** and **combobox**.
10. WAP using **check boxes** for following font effects.
> Bold
> Italic
> Underline
> Increase font size
> Decrease font size
> Font color
10. WAP for temperature conversion using **option button**.
11. WAP to launch a rocket using **pictures box** and **timer control**.
12. WAP to change back color of any control (label, textbox) using **scroll box**.
13. WAP to search an element for a **one dimension static array**.
14. WAP to sort a dynamic array of
    (a)n numbers
    (b)n strings   (Input array size at run time)
15. WAP to take input of two matrices and perform their addition, subtraction and multiplication using **menu editor**.
17. WAP to illustrate **call by value and call by reference** (to swap to values)
18. Write a program to calculate factorial of a number using **user defined function.**
19. Take input of a word and WAP to check whether it is a palindrome or not. **(Without using structure fun)**
20. WAP to find smallest among given three numbers using **user defined procedures**.
21. WAP to generate, print and find sum of first n elements of fibonacci series using **recursion**.
22. WAP to perform read write operations in a **sequential file**.
24. WAP to display records of a table using **DAO & bound control** code for buttons to move at first record, next record, previous record, last record in the table.
25. Create a table using **visual data manager** and write a program using **RDO** & **advanced bound control** to add, delete, edit & navigate records.
26. WAP to access a database using **ADO &** display a key column in the combo box or list box when an item is selected in it, its corresponding records is shown in **MSH flex grid.**
27. Using **Data Environment** create a program to display records of any table.
28. WAP to generate marksheet of students in a class through **data report**.
30. Using **drive, directory and file list box** (it will show only .bmp files). Let the user select the bmb files, which will appear in picture box as user click on any item in list box.
31. Using **toolbar** design an interface for string manipulation. Toolbar should have tabs to
    (a) Find length of string (b) No of blank spaces in sting (c) Reverse the string
    Also show current date & time in **status bar.**

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:

Admission

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:

STUDENTS REPORT

Pandit Ravishankar Shukla University

NAME	ROLL NO.	CLASS
Rahul	40	BCA-1
Preeti	85	BCA-1
Priya	74	BCA-1
Richa	95	BCA-1

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.

USERNAME :
PASSWORD :

When user types characters in a password field, the browser displays asterisks or bullets instead of characters.

Submit Query

Done   My Computer   100%

Q.17. Create the following HTML form.

FIRSTNAME : [_____]
LASTNAME : [_____]

GENDER :
Male ○ Female ○

SUBJECTS: [Multimedia ▾]
          | Multimedia |
          | Operating System |
          | CSA |

[Submit Query]

Q.18. Create the following HTML form.

Enter your name : [_____]
Enter your rollno : [_____]

Subjects :
☐ Java
☐ C
☐ Visual Basic
☐ C++

Class: [BCA I ▾]
       | BCA I |
       | BCA II |
       | BCA III |

[Submit Query]

Q.19. Write the HTML coding for the following equations:

$C_2H_5OH+PCL_5=C_2H_5CL+POCL_3+HCL$

$4H_3PO_3=3H_3PO_4+PH_3$

$PCL_3+CL_2=PCL_5$
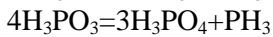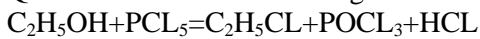
Q.20. Write the HTML code to display the following:

- 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
   D. Batsman
      i. Sachin Tendulkar
      ii. Rahul Dravid
      iii. Virendra Sehwag
   E. Bowler
      d. Kumble
      e. Zaheer Khan
      f. Balaji
   F. Spinner
      d) Harbhajan
      e) Kumble

f)Kartik