PT. RAVISHANKAR SHUKLA UNIVERSITY, RAIPUR (C.G.)

POST GRADUATE DIPLOMA IN COMPUTER APPLICATION
[DURATION – ONE YEAR – FULL TIME]

The duration of the course shall be one year consisting of two semesters. There shall be three theories and two practical courses in the each semester.

FIRST SEMESTER

PGDCA-101 : Fundamentals of Computers.
PGDCA-102 : Office Automation.
PGDCA-103 : Programming in C
PGDCA-104 : Practical based on PGDCA-102.
PGDCA-105 : Practical based on PGDCA-103.

Second Semester

PGDCA-106 : Web Technology
PGDCA-107 : Database Management Systems.
PGDCA-108 : E-commerce & Accounting with Tally
PGDCA-109 : Practical based on PGDCA106 AND PGDCA 107
PGDCA-110 : Practical based on PGDCA-108

Session 2024-25

PT. RAVISHANKAR SHUKLA UNIVERSITY, RAIPUR (C.G.)

POST GRADUATE DIPLOMA IN COMPUTER APPLICATION
[DURATION – ONE YEAR – FULL TIME]

SCHEME OF TEACHING AND EXAMINATIONS
P.G.D.C.A. (Post Graduate Diploma in Computer Applications)

FIRST SEMESTER

Subject Code	SUBJECTS	Teaching Load Per Week			Examination Marks							
					Max. Marks				Min. Marks			
		L	T	P	Th	Ses	Pr	Total	Th	Ses	Pr	Total
PGDCA101	Fundamentals of Computers	3	2	–	80	20	–	100	20	13	–	33
PGDCA102	Office Automation	3	2	–	80	20	–	100	20	13	–	33
PGDCA103	Programming in C	3	2	–	80	20	–	100	20	13	–	33
PGDCA104	Practical based on PGDCA-102	–	–	3x2	–	–	100	100	–	–	40	40
PGDCA105	Practical based on PGDCA-103	–	–	3x2	–	–	100	100	–	–	40	40
	TOTAL	**9**	**6**	**12**	**240**	**60**	**200**	**500**	**60**	**39**	**80**	**179**

Session 2024-25

SCHEME OF TEACHING AND EXAMINATION
P.G.D.C.A. (Post Graduate Diploma in Computer Applications)

SECOND SEMESTER

Subject Code	SUBJECTS	Teaching Load Per Week			Examination Marks							
					Max. Marks				Min. Marks			
		L	T	P	Th	Ses	Pr	Total	Th	Ses	Pr	Total
PGDCA106	Web Technology	3	2	_	80	20	_	100	20	13	_	33
PGDCA107	Database Management Systems	3	2	_	80	20	_	100	20	13	_	33
PGDCA108	E-commerce & Accounting with Tally	3	2	_	80	20	_	100	20	13	_	33
PGDCA109	Practical based on PGDCA106 AND PGDCA 107	_	_	3x2	_	_	100	100	_	_	40	40
PGDCA110	Practical based on PGDCA-108	_	_	3x2	_	_	100	100	_	_	40	40
	TOTAL	**9**	**6**	**12**	**240**	**60**	**200**	**500**	**60**	**39**	**80**	**179**

FUNDAMENTALS OF COMPUTERS
Subject Code - PGDCA-101

Course Outcomes

- Bridge the fundamental concepts of computers with the present level of knowledge of the students.
- Student will come to know about different input and output devices.
- Understand the basics of digital computer along with different storage unit.
- Familiarize operating systems, programming languages, peripheral devices, networking, multimedia and internet
- Understand different types of software .

Syllabus

UNIT - I Introduction to Computers

Computer system: characteristics and capabilities. Computer Hardware and Software: Block Diagram of a Computer, Different Data Processing: Data, Data Processing System, Storing Data, Processing Data. Types of Computers: Analogue, Digital, Hybrid, General and Special Purpose Computers. Generation of Computers.

UNIT - II Computer Peripherals

Introduction to Input Devices: Categorizing Input Hardware, Keyboard, Direct Entry – Card Readers, Scanning Devices – O.M.R., Character Readers, Thumb Scanner, MICR, Smart Cards, Voice Input Devices, Pointing Devices – Mouse, Light Pen, Touch Screen. **Computer Output:** Output Fundamentals, Hardcopy Output Devices, Impact Printers, Non-Impact Printers, Plotters, Computer output Microfilm/Microfiche (COM) systems, Softcopy Output Devices, Cathode Ray Tube, Flat Screen Technologies, Projectors, Speakers.

UNIT - III Basic Components & Storage

Central Processing Unit: The Microprocessor, control unit, A.L.U., Registers, Buses, Main Memory, Main Memory (RAM) for microcomputers, Read Only Memory(ROM). **Storage Devices:** Storage Fundamentals, Primary and Secondary Storage, Data Storage and Retrieval Methods – Sequential, Direct & Indexed Sequential, Tape Storage and Retrieval Methods Tape storage Devices, characteristics and limitations, Direct access Storage and Microcomputers - Hard Disks, Disk Cartridges, Direct Access Storage Devices for large Computer systems, Mass storage systems and Optical Disks, CD ROM.

UNIT - IV Computer Software & Languages

System Software: System software Vs. Application Software, Types of System Software, Introduction and Types of Operating Systems. Boot Loader, Diagnostic Programs, BIOS, Utility Programs. **Application Software:** Microcomputer Software, Interacting with the System, Trends in PC software, Types of Application Software, Difference between Program and Packages. **Computer Languages:** Definition, Generations of computer languages, Types of Languages, Language Processors: Assembler, Interpreter, Compiler.

UNIT – V: Operating System and Linux

Introduction, Uses of OS, Functions of OS, Booting process, Types of Reboot, Booting from different OS, Types of OS, DOS, Windows, Linux Open source Software concept and evolution of Linux; Features of Multi-User Operating System; Structure of Linux OS; Security Features of Linux, File System, Directory Structure and related commands. Linux Editors & editor commands, Linux commands cd, md, rm, mv, cp, ls, cat, find, grep.

Books Recommended:

1. Computer Fundamentals, P. K. Sinha, BPB Publications, Sixth Edition.
2. Introduction to Information Technology, V. Rajaraman, PHI, Second Edition.
3. Operating System Concepts, Silberchartz, Galvin and Gagne, Wiley India Edition
4. Unix Concepts and Applications, Sumitabha Das, McGarw hill

OFFICE AUTOMATION
Subject Code - PGDCA-102

Course Outcomes

After completion of the course,

- Students would be able to documents, spreadsheets, make small Presentations and would be acquainted with internet.
- Student will come to know about database creation and about creation of journal, ledger, trial balance of transaction in tally software.
- This subject helps in understanding the basics of office automation task.

Syllabus

UNIT–I Working with MS-Word

Introduction to word processing's software and it's features, Creating new document, Saving documents, Opening and printing documents. Home Tab: Setting fonts, Paragraph settings, various styles (Normal, Nospacing, Heading1, Heading2, Title,Strong), Find & replace, Format painter, Copy paste and paste special. Insert Tab: Pages, Tables, pictures, clipart, shapes, header & footer, word art, equation and symbols. Page Layout Tab: Page setup, page Background, Paragraph (indent and spacing).Mailing Tab: Create envelops and Labels, Mail merge. Review Tab: Spelling and grammar check, New comment, Protect document, View Tab: Document views, Zoom, Window (New window, Split, Switch window).

UNIT-II Introduction to MS-Excel

Introducing Excel, Use of excel sheet, Creating new sheet, Saving, Opening, and printing workbook. Home Tab: Font, Alignment, Number, Styles and cells and editing, Conditional Formatting. Insert Tab: Table, Charts (column chart, Pie chart, Bar chart, Line chart) and Texts (header & footer, word art, signature line).Page Layout Tab: Page setup options, Scale to it(width, height, scale). Formulas Tab: Auto sum (sum, average, min, max),logical(IF, and, or, not, true, false), Math & trig(sin,cosine,tangent,ceil,floor,fact,mod,log),watchwindow.Data. Tab: Get external data from MS Access, Sort and filter options, Data validation, Group and ungroup. Review Tab: Protects Sheet, Protect workbook, Share work book. View Tab: Page breaks, Page layout, Freezing panes, Split and hide.

Unit-III Advanced Excel

Data analysis, Financial Modeling, Decision Making, Dashboard Reporting. Project Management and its Templates-Gantt Chart Template, Dashboard Template, Status Report Template, Action Plan Template, Estimate Template etc. Budgeting and Forecasting, Inventory Management, advance excel formula- index match, if combined with and / or, offset combined with sum or average, choose, xnpv and xirr, sumif and countif, pmt and ipmt, concatenate ,Vlookup, Hlookup etc.

UNIT-IV Working with MS-PowerPoint

Introducing power point, Use of power point presentation, Creating new slides saving, Opening and printing. Home Tab: New slide, Layout, Reset, Delete, Setting text direction, Align text, Convert to smart art,drawing options. Insert Tab: Table, picture, clipart, photo album, smart art, shapes and chart, movie and sound, hyperlink and action, textbox, word art, object. Design Tab: Page setup options. slide. Orientation, applying various themes, selecting background style and formatting it. Animations Tab: Custom animation for entrance,exit and emphasis, applying slide transition, setting transition speed and sound, animation on rehears timing.Slides how & view Tab: Start slide show options, setup options. View tab: Presentation views,colors andwindow option.

UNIT-V Working with MS-Access

Front end and backend of application, Introduction to DBMS, Features of DBMS, Creating blank databases, saving accdb format. Defining data types MS-access. Home Tab: Datasheet view, design view, pivot chart view, pivot table view, sort and filter options. Create Tab: Creating tables, Creating reports, Query wizard. External Data Tab: importing data from access and excel sheet, exporting data to excel and MS word. Datasheet Tab: Relationships,Fields and columns options, Data type and formatting options.

Recommended book:

1. Microsoft office 2013 fundamentals: L. Story, D. Walls
2. M. S. Office : S.S. Shrivastava, Firewall Media
3. Office 2016in easy step: Michael price & Mike McGrath
4. Excel-Based Decisions in Managerial Accounting: By: Teresa Stephenson, Jason Porter
5. Excel for Marketing Managers (Excel for Professionals series) Kindle Edition

6. Managerial Economics Using Excel: David Whigham

PROGRAMMING IN C
Subject Code - PGDCA-103

Course Outcomes

After the course the students are expected to be able to (this is what the exams will test) :

- Identifysituations where computational methods and computers would be useful.
- Given a computational problem, identify and abstractthe programming task involved.
- Approach the programming tasks using techniques learned and write pseudo-code.
- Choose the right data representation formats based on the requirements of the problem.
- Use the comparisons and limitations of the various programming constructs and choose the right one for the task in hand.
- Write the program on a computer, edit, compile, debug, correct, recompile and run it.
- Identify tasks in which the numerical techniques learned are applicable and apply them to write programs, and hence use computers effectively to solve the task.

Syllabus

UNIT – I: Introduction:

Introduction Character set, Identifiers and Keywords, Variables, Displaying variables, Reading Variables, Character and Character String, Qualifiers, Type define Statements, Value initialized variables, Constants, Constant Qualifier, Operators and Expressions, Operator Precedence and Associativity, Basic input output: Single Character I/O, General Outputs, Types of Characters in format string, Scanf with specifiers, Searchset Arrangements and Suppression Character, Format Specifiers for scanf.

UNIT – II: Control Structures & Functions:

Control Structure: if-statement, if-else statement, multiple decisions, nested if statements, switch statement, for-loop, while-loop, do-while loop, break statement, continue statement, goto statement.

Functions: The main function, functions accepting more than one parameter, User defined and library functions, Concept associatively with functions, function parameter, Return value, recursion comparisons of Iteration and recursion variable length argument list.

UNIT – III: Arrays & Pointes:

Scope and Extent, Arrays, Strings, Multidimensional Arrays, Strings, Array of Strings, Function in String, 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.

UNIT – IV: Structure and Union:

Declaring and using Structure, Structure initialization, Structure within Structure, Operations on Structures, Array of Structure, Array within Structure, Creating user defined data type, pointer to Structure and function. Union, difference between Union and Structure, Operations on Union, Scope of Union.

UNIT – V: Dynamic Memory Allocation and File Handling:

Dynamic Memory Allocation: Library functions for Dynamic memory allocation, Dynamic Multi-Dimensional arrays.

File Handling: - Introduction, Structure, File handling, Functions file types, Un-buffered and buffered file, Error handling.

Recommended Books:

1. Let Us C - Yashwant Kanetkar.
2. Programming in C - E. Balagurusamy

PGDCA-104: Practical based on PGDCA-102

1. Scheme of Examination: -

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

Program 1 (Word)	-	15
Program 2 (Excel)	-	15
Program 3 (Access)	-	15
Program 4 (Powerpoint/Publisher)	-	15
Viva-Voice	-	20
[Practical Copy + Internal Record]	-	20
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

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).

(i) Insert the following text after the first paragraph
The main components of a word processing system are listed below:
a. Computer
b. Printer
c. A word processing software

(ii) Save the document as Word1.doc
(iii) Move the second paragraph to the end of the document. Using darg & drop.
(iv) Move the second paragraph in the end of the document using cut, paste operations.
(v) Undo the above actions.
(vi) Now use Redo actions
(vii) Go to the End of the document (in one step)
(viii) Go to the Beginning of document (in one step)
(ix) Insert page break before the third paragraph.
(x) Search the word "computer: in your document with options Match case, find whole words only.
(xi) Replace the word "typewriters" with "word processor"
(xii) Undo the above action
(xiii) Remove All page breaks from your document
(xiv) Change the magnification of your document to different percentages using zoom features.
(xv) Format the above written paragraphs and give the options as follows:

- Alignment justified
- Indentation: left 0.2 right:0.2
- Spacing: before 6 pt. after:6 pt.
- Special: first line by :0.4"
- Line spacing 1.5 lines.

(xvi) Set the default tab stop to 0.3"
(xvii) Set the margins to 1.25
(xviii) Format the page using

a. Left margin:0.5, right margin: 0.5
b. Top margin:1.5, bottom margin:0.5
c. Gutter Margin: 1indentation: left 0.2 right:0.2
d. Header Margin:0.5

(xix) 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.

(xx) 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.

2. 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:

9. Create the following:

10. Create the following table in MS-Word:

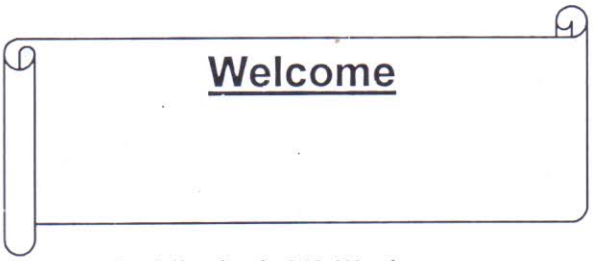
Admission 2011-2012

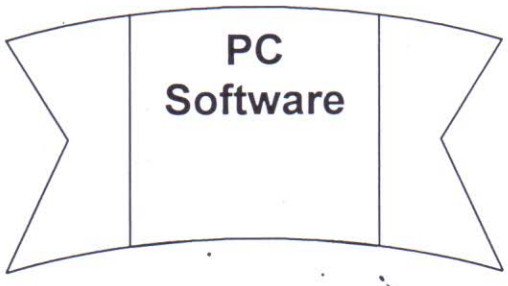
Course	OC	OB	MBC	SC/ST	Total
Computer Science	9	18	5	5	37
Commerce	14	25	6	5	50
Mathematics	12	20	4	4	40

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.





13. Insert the following in MS-Word.

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:

1. Actors
    1. Bruce Willis
    2. Gerard Butler
    3. Vin Diesel
2. Actress
    1. Julia Roberts
    2. Angelina Jolie
    3. Kate Winslet
    4. Cameron Diaz

16. Write the following in MS-Word:

1. Cricket Players

3. Batsman
    1. Sachin Tendulkar
    2. Rahul Dravid
    3. Virendra Sehwag
4. Bowler
    a. Kumble
    b. Zaheer Khan
    c. Balaji
5. 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. Creates 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		
Somy9000	15	800		200		
Tanya7000	12	900		1800		

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

2. The following worksheet contains Roll.Nos. & Marks in 5 subject of a student. Calculate his grades as per the following :

Marks	**Grades**
0-40	4
40-50	3
50-60	2
60 & above	1

	A	B	C	D	E	F
1	Roll No.	ENG	HINDI	SCIENCE	MATHS	SO. SCI
2	110	45	56	67	78	60
3	GRADE					
4						
5						

3. Create a worksheet as follows

Pace computer (ATC CEDT) Govt. Of India

Payroll for employee

Empcode name	**name**	**Doj**	**salary**	**bonus**	**net salary**
Emp001	Meenu	3-Mar-95	5000		
Emp002	Manoj	4 -Mar-06	4000		
Emp003	Preeti	3-Mar-95	4800		
Emp004	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. The following worksheet contains Name & Sales of 10 salesmen .Calculate commission as per the following:

Sales	**Commission**
First 30,000	5%
Next 40,000	10%
Excess	15%

	A	B	C
1	NAME	SALE	COMMISSION
2			
:			
:			
11			

5. The following worksheet contains Name & Taxable Income for 50 employees .Calculate Income Tax , Surcharge and Total Tax for the following worksheet

	A	B	C	D	E
1	NAME	TAXABLE INCOME	INCOME TAX	SURCHARGE	TOTAL TAX
2					
:					
:					
50					

Income Tax is calculated as follows :

Taxable Income	Income tax First 1,50,000	Nil
Next 1,00,000	10%	
Next 75,000	20%	
Excess	30%	

Surcharge is 3% on Income Tax if Taxable income is above 5,00,000

6. A worksheet contains name and marks in 3 subjects. Calculate Total Marks

	A	B	C	D	E
1	NAME	SUB 1	SUB 2	SUB 3	TOTAL MARKS
2	Deep	30	34	44	
3	Jayesh	40	35	45	
4	Yash	45	36	47	
5	Sara	48	32	50	
6	Gita	35	32	43	
7	Jinal	32	31	37	
8	Kavita	36	28	38	
9	Minal	23	25	40	
10	Naresh	43	27	50	
11	Rima	37	44	46	

a) Construct 3D Pie Chart for Total marks
b) Construct 2D Line Chart for Subject 1 and Subject 3
c) Construct 2D Column Chart for Sub1, Sub2, Sub3
d) Construct Stacked Column Chart for Sub1, Sub2, Sub3

7. For the following worksheet containing amount spent for various items during the year, prepare scenarios where

a) Machinery increases to 80,000 , carriage increases to 9000 & Postage increases to 8000
b) Carriage increases to 10,000 Office equipment increases to 7000 and postage increases to 9000

	A	B
1	Items	Costs
2	Machinery	60000
3	Carriage	8000
4	Transport	30000
5	Office equipment	6000
6	Postage	7000
7	Miscellaneous	3000
8	Generator	5000
9	**Total**	**119000**

8. Using the goal seek feature find out the interest rate it must be to earn interest 500.

Principle	1500
Rate	4%

Time 5

9. There are two images titled "image 1" and "image 2." The following information is given:

Image-1

	A	B
1	Year	Revenue
2	2018	$ 1,500,000
3	Minimum Expected Growth Rate	12.00 %

Image-2

	C	D	E
6			
7		Revenue	
8	Growth Rate	$1,680,000	
9	12.50%		
10	13.50%		
11	14.50%		
12	15.50%		
13	16.50%		
14	17.50%		
15	18.50%		
16	19.50%		
17	20.50%		
18	21.50%		
19	22.50%		
20			
21			

- Image 1 shows an organization's revenue (in $) for 2018 in cell B2. The minimum growth rate expected is given as 12% in cell B3. The projected revenue (in $ in cell B5) for 2019 has been calculated by using the formula "=B2+(B2*B3)."
- Image 2 shows the possible values (in column C) that the growth rate can assume. The value of cell D8 has been explained in steps 1 and 2 (given further in this example).

Calculate the projected revenues (in column D) according to the different growth rates (in column C) given in image 2

10. Create the worksheet as follows

Roll No	Name	English	Maths	Total	Avarage	Division
101	Kushagra	95	99			
102	Ajay	92	95			
103	vijay	70	69			

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
v. maximum marks in each student as 100
vi. Apply conditional formatting for division column, first division should be in bold, second division should be in italic and third division should be underline

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
WebSite	Text 100	Contact's Web 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	Product Number	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.

MS Publisher

1. Create a **business card** for your business. Include the following information:
   a. Logo
   b. Company Name
   c. Your name and title (Eg. Owner, President, Manager)
   d. Address
   e. Phone
   f. Email
   g. Web address

2. Create a Greeting Card. Using the following
   a) Greeting of your choice
   b) Image on the front of the card
   c) Cost
   d) Made by
   e) Image on the inside folds of the card
   f) Image on the back of the card
3. create a Letterhead for your business. Be sure to include the following information:
   a. Logo
   b. Company Name
   c. Address
   d. Phone
   e. Email
   f. Web address
4. Create a Flyer for the Open House. Be sure to include the following information:
   a. Logo
   b. Company Name
   c. Address
   d. Open House
   e. Date and Time of the Open House

f. A little information about what your company does, if it isn't obvious
g Promise some kind of food (Eg. Cookies and punch, hors d'oeuvres, cake)
h. Door prizes

5. Create a brochure that must :
   a) Modify a template to create a brochure
   b) Replace placeholder graphics with new
   c) Use a minimum of 2 graphics
   d) Replace text
   e) Appropriate use of text and graphics for a brochure
6. Create a Invitation Card
   a) Your Name
   b) The Event
   c) The Starting Time
   d) The Place
   e) What to Wear
   f) What to Bring

7. Create Award Certificate
   a) All relevant info
   b) An interesting graphic or picture
   c) It must be eye catching pleasing
   d) Originality and creativity

Keep in mind if you wish you use certificate paper or plain paper

6. Create Breakfast Product Advertisement

design an advertisement for a NEW and ORIGINAL breakfast product using Microsoft Publisher. This advertisement should be eye-catching, well balanced, and free of errors.

- 1 font only-You may use different sizes and colors
- 3 graphic maximum- Make sure they go with the theme of the ad
- Name the product using Word Art (watch your font choice!)
- Create a catchy slogan for the product and rotate using the custom rotate button
- Provide a short description of the product
- Create a coupon that includes a border, name of the product, amount saved, and expiration date.
- Include either a table or bullets somewhere in your design that lists some of the selling points of your product
- Must fit on one page only

7. Create a banner for a "Grand Opening". include the following:
   a) Border
   b) Business Name, Logo, Contact Information
   c) Date
   d) Incentive
   e) Unique Design

8. Create a Gift Certificate/ Gift Card for an existing business that is similar to your group business.
   a) Business Name, Logo, Contact Information
   b) Recipient Name
   c) Amount $
   d) Unique Design
   e) Any other important information

PGDCA-105 : Practical based on PGDCA-103

1 **Scheme of Practical Examination:-**

Practical examination will be of 3 hours duration. All programs should be with flowchart & algorithms. The distribution of practical marks is as follows and

Programme 1 (with flowchart & algorithms)	-	20
Programme 2 (with flowchart & algorithms)	-	20
Programme 3 (with flowchart & algorithms)	-	20
Viva-Voice		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 programs or a similar type of programs should be prepared as per the practical list.

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)
```
* * * * *
 * * * *
  * * *
   * *
    *
```

b)
```
1
2 3
4 5 6
7 8 9 10
```

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

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

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.

   c) Print sin series up to n terms and its sum.

   d) Print exponential 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.

8. Write program no. 6 but use library function to perform above tasks.

ARRAY

9. 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.

10. Create a single program to perform following tasks using switch, if..else, loop and single dimension integer array:

    a) Sort the elements.

    c) Search for presence of particular value in array element using linear search.

    d) Search for presence of particular value in array element using binary search.

11. 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.

12. 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.

    d) Inverse of matrix.

    e) Transpose of matrix.

    f) Sum of diagonal elements

13. 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.

    c) Searching for presence of a string in array.

FUNCTIONS

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

15. Write program to demonstrate difference between static and auto variable.

16. Write program to demonstrate difference between local and global variable.

17. 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.

    c) Print Sin series up to n terms and its sum.

    d) Print exponential series up to n terms and its sum.

18. 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.

    c) Print Sin series up to n terms and its sum.

    d) Print exponential series up to n terms and its sum.

    e) Print natural series up to n terms and its sum

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

Array & Function

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

    a) Addition of two matrix.

    b) Subtraction of two matrix.

    c) Multiplication of two matrix.

    d) Inverse of matrix.

    e) Transpose of matrix.

21. Create a single program to perform following tasks using switch, if..else, loop, user defined function and single dimension character array:

    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, consonant in each word of a sentence and no, of punctuations in sentence.

22. Create a single program to perform following tasks using switch, if..else, loop, function and single dimension integer array:

    a) Sort the elements.

    b) Find largest element and smallest element.

    c) Search for presence of particular value in array element using linear search.

    d) Search for presence of particular value in array element using binary search.

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

a) Sorting of string

b) Finding the largest string, lexicographically.

c) Finding the smallest string, lexicographically.

c) Searching for presence of string in array.

STRUCTURE & UNION

24. 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.

25. 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.

26. 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.

27. Write program to create structure complex having data members to store real and imaginary part. Provide following facilities:

    a) Add two complex nos. using structure variables.

    b) Subtract two complex nos. using structure variables.

    c) Multiply two complex nos. using structure variables.

    d) Divide two complex nos. structure variables.

Use structure as argument to function and function returning structure.

POINTER

28. Define union Emp having data members:-one integer, one float and one single dimension character array. Declare a union variable in main and test the union variable.

29. Define an enum Days_of_Week members of which will be days of week. Declare an enum variable in main and test it.

30. Write a program of swapping two numbers and demonstrates call by value and call by reference.

31. Write program to sort strings using pointer exchange.

32. 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.
33. Create a program having pointer to void to store address of integer variable then print value of integer variable using pointer to void. Perform the same operation for float variable.
34. Write program to find biggest number among three numbers using pointer and function.
35. Write program to Create a structure Employee having data members to store name of employee, employee id, salary. Use Pointer to structure to store data of employee and print the stored data-using pointer to structure.
36. Write program to Create a structure Employee having data members to store name of employee, employee id, salary. Use Pointer to structure to simulate dynamic array of structure store data of n employees and print the stored data of n employees using pointer to structure.
37. Write a program to sort a single dimension array of integers of n elements simulated by pointer to integer. Use function for sorting the dynamic array.
38. Write a program to sum elements of a double dimension array of integers of m rows and n columns simulated by pointer to pointer to integer. Use function for sum the elements of the dynamic array.
39. Write program to demonstrate difference between character array and pointer to character.
40. Write program to demonstrate difference between constant pointer and pointer to constant.
41. Write program to demonstrate pointer arithmetic.
42. Write program to demonstrate function-returning pointer.
43. Write program using self-referential pointer to structure to create and print the linked list, data structure.

FILE STREAMS

44. Write program to copy content of one file to other file removing extra space between words name of files should come from command line arguments.
45. Write program to create a file 'data' containing a series of integers and count all even numbers present in the file 'data'.
46. Write a program to count no. of tabs, new lines, character and space of a file.
47. Write a program to read item number, rate and quantity from an inventory file and print the followings:
    1. Items having quantity > 5.
    2. Total cost of inventory.

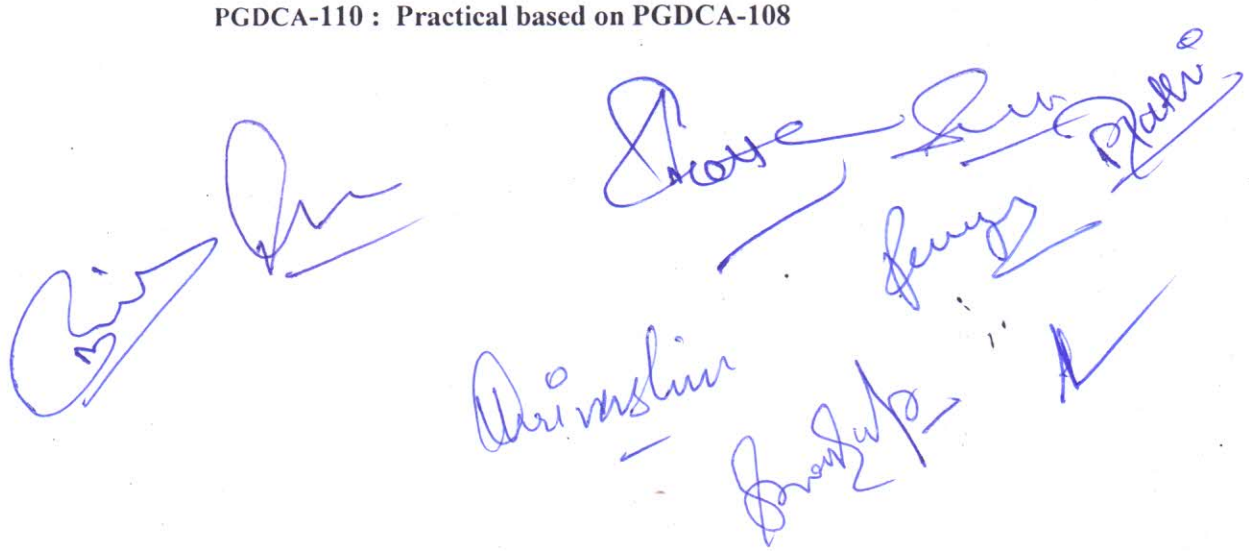
Pt. RAVISHANKAR SHUKLA UNIVERSITY :: RAIPUR (C.G.)

POST GRADUATE DIPLOMA IN COMPUTER APPLICATION 2022-2023

[DURATION - ONE YEAR - FULL TIME]

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

Second Semester: **PGDCA- 106 : Web Technology**
PGDCA-107 : Database Management Systems.
PGDCA-108 : E-commerce & Accounting with Tally
PGDCA-109 : Practical based on PGDCA106 AND PGDCA 107
PGDCA-110 : Practical based on PGDCA-108



Web Technology
Subject Code - PGDCA-106

Course Outcomes

- Students will become familiar with fundamentals of computers and organization of computer various internet protocols and the concepts of internet.
- Students will be able to differentiate between various e-mail protocols and their working.
- Students will become familiar with the concept of remote login with the understandability of hosting and maintaining of website.
- Students will get knowledge about internet security and firewalls.
- Students will become familiar with functionality of e-commerce and e-payment system.

Syllabus

UNIT-I Introduction to Internet

Internet: Evolution, Concepts, Growth of Internet, ISP, ISP in India, Types of connectivity, Dial-up, leased line, DSL, Broadband, RF, VSAT etc., Methods of sharing of internet connection, Use of proxy server, Concept of Search Engines, Search engines types. Searching the Web, Web Servers. E-Mail: Concepts of e-mailing, POP and WEB Based E-mail, merits, address, Basics of Sending & Receiving.

UNIT -II HTML & Word press

Historical context , Basic structure of an HTML docurment , Elements of HTML , HTML Tag & Attributes ,HTML Headings ,HTML Paragraphs, HTML Styles, HTML Text Formatting, HTML Comment , HTML Tables , HTML Frames , Hyperlinks, Images , Forms and Controls. Creating Working with word press, front page.

UNIT - II Working with CSS

CSS Syntax, CSS Selectors, Ways to use CSS, Comments, links lists tables, forms displays position Z-index overflow compensators pseudo class and pseudo elements Comment, Colors, Backgrounds, Borders, Margins, Padding, CSS Outline, CSS Text Formatting& Align, CSS Font, Tables, Forms.

UNIT -IV JavaScript

HTML Basic concepts, Web designing issue, Structure of HTML documents, HTML Elements: Core attributes, Language attributes, Core Events, Block Level Events, Text Level Events, Linking Basics, Linking in HTML, Images and Anchors, Anchor Attributes, Image Maps, Semantic Linking Meta Information, Image Preliminaries, Image Download issues, Images as Buttons, Introduction to Layout: Backgrounds, Colors and Text, Fonts, Layout with Tables, Introduction to CSS.

UNIT - V PHP& MySQL

Data types, Constraints and operators, Switch and loops , functions and arrays, form handling and validation, file upload , date and time, sessions , database connection , create database Join database,
My SQL create table and data type: MySQL create tables and data types, PHP, My SQL Connection (MySQL)

Recommended book:

1. Web Technologies, HTML, JavaScript, PHP Dream tech Press.
2. Internet, The Complete reference, HTML and CSS, Thomas A. Powell, McGraw-Hill.
3. Web Technology and Design , Xavier, C New Age international
4. HTML, DHML, JavaScript, Perl and CGI, Ivan Bayros, BPB Publication.
5. PHP: The Complete Reference – Steven Holzner
6. Learning PHP MYSQL & JavaScript , XML XHTML AJAX, PHP and JQuery – DT Editorial Service
7. Head First PHP & MySQL- Lynn Beighley & Michael Morrison

Database Management Systems
Subject Code - PGDCA-107

Course Outcomes

- Students will be able to design a database based on the given requirements.
- Students will be able to make projects with knowledge of subject provided to them.
- Students will be able to write Standard Query Language statements.
- Students are expected to apply normalization techniques on given database.

Syllabus

UNIT – I: Introduction To DBMS

Purpose of database systems, views of data, Data Modeling, Database Languages, Transaction Management, Storage Management, Database Administrator and User, Database System Structure.

UNIT – II: E-R Model

Entity - Relationship model as a tool for conceptual design-entities, attributes and relationships. ER diagrams; Concept of keys; Case studies of ER modeling Generalization; specialization and aggregation. Converting an ER model into relational Schema

UNIT – III: Relational Model

Structure to Relational Database, select, project, cross product different types of joins (inner join, outer joins, self-join); set operations, Tuple relational calculus, Domain relational calculus, Simple and complex queries using relational algebra, stand alone and embedded query languages.

UNIT – IV: Relational Database Design

Normalization concept in logical model; Pitfalls in database design, update anomalies: Functional dependencies, Join dependencies, Normal forms (1NF, 2NF, 3NF). Boyce Codd Normal form, Decomposition, Multi-Valued Dependencies, 4NF, 5NF, De-Normalization.

UNIT – V: Introduction to RDBMS Software – SQL/Oracle

Introduction to personnel and Enterprises Oracle, Data Types, Commercial Query Language, SQL, SQL* PLUS. **DDL and DML**: Creating Table, Specify Integrity Constraint, Modifying Existing Table, Dropping Table, Inserting, Deleting and Updating Rows in as Table, Where Clause, Operators, ORDER BY, GROUP Function, SQL Function, JOIN, Set Operation, SQL Sub Queries. Views: What is Views, Create, Drop and Retrieving data from views. **Security**: - Management of Roles, Changing Password, Granting Roles & Privilege, with drawing privileges.

Recommended Books:

1. Data Base Systems : Silberschatz & Korth.
2. An Introduction to Data base System : C.J. Date
3. Data Base Management System : Raghu Ramakrishnan.
4. Data Base Management System : Elmasri & Nawathe.
5. Data Base Management System : Alexies & Mathews

E-commerce & Accounting with Tally
Subject Code - PGDCA-108

Course Outcomes

- Students will be familiar with various Internet protocols and the concepts of Internet.
- Students will able to differentiate between various e-mail protocols and their working.
- Students will be familiar with the concept of remote login with the understandability of hosting and maintaining of website.
- Students will also get knowledge about Internet security and Firewalls.

Syllabus

Unit-I

E-Commerce: Introduction to E-Commerce: Emergence of the Internet, Commercial use of the internet. Emergence of World Wide Web, Transition to E-Commerce in India, E-Commerce opportunities for Industries, E-payment System, Security threats with E-commerce, E-market, Future of E-market. **Business Models:** Models based on Relationship of Transaction Brokerage Model, Aggregator Model, Infomediary Model, and Community Model. **Value Chain parties:** B2C, B2B, C2C, C2B, Models based on Model, Manufacturer Model, Advertising Model. Subscription Model, Affiliate Model.

Unit-II

Accounting Basics: Introduction to accounting principles - Journal entries, ledgers, trial balance - Final accounts, Tally Interface and Navigation: - Understanding the user interface, Data entry and modification, Masters Creation (company, accounts, ledgers, group inventory).

Unit-III

Transactions and Vouchers: - Recording purchases, sales, receipts, payments.- Creating vouchers (sales, purchase, contra) - Bank reconciliation, Transaction other than purchase sales, Tally as software and banking,
Reports and Analysis: - Generating basic reports (profit & loss, balance sheet, cash flow) - Exporting reports to other formats. Bill-wise details, cost accounting and interest calculation.

Unit-IV

GST and Taxation: Understanding GST basics - Creating GST invoices and filing returns.
Inventory Management: Basic stock management (adding, deleting, modifying items) - Stock valuation methods.

Unit-V

Advance Accounting: Bill Wise Details, Currency, Interest Calculation, Job Work, manufacturing, Inventory management, Tally Security, GST.
Tally Prime: - TDS (Other Than Salary) theory, TDS Deduction, Challan Etc. Practical Using Tally, Reports Etc. Payroll: Legal terms, PF, ESI, TDS, Etc. Setup with Tally - Process, Masters, Salary, Accounting. Reports,

Recommended book:

7. Frontiers of Electronic Commerce: Ravi Kalakota , Andrew B. Whinston
8. Tally Essential: Tally Education Pvt. Ltd.
9. Learn Tally Prime With GST : Gaurav Agrawal
10. Mastering Tally PRIME: Training, Certification & Job

PGDCA-109: Practical based on PGDCA106 AND PGDCA107

Class-PGDCA-II Semester
Subject: Web Technology & DBMS (SQL)
PGDCA 109-Practical Based On PGDCA 106 & PGDCA 107

1. Scheme of Examination:

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

Program 1(Web Technology)	-	**15**
Program 2(Web Technology)	-	**15**
Program 3(SQL)	-	**15**
Program 4(SQL)	-	**15**
Viva-Voice	-	**20**
[Practical Copy + Internal Record]	-	**20**
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 similar types of programs should be prepared.

List of Practical

S.No.	Objective of Practical
1.	Write an HTML program to create Ordered and Unordered list.
2.	Write an HTML program to create the following table: Name / Subject / Marks Arun / Java / 70 Arun / C / 80 Ashish / Java / 75 Ashish / C / 69
3.	Write an HTML program to create webpage using Frameset Tag and Frame Tag.
4.	Write an HTML program to demonstrate hyperlinking between two web pages.
5.	Design a web-page, insert an image on to the web-page such that image is of height 300 and width 300 pixels. The image should have a alt text in it.
6.	Write an HTML program to create registration form.
7.	Write CSS code to explain Selector (element, id, class).
8.	Write CSS code to explain background properties (background-color, background-image).
9.	Write CSS code to explain text properties.
10.	Write CSS code to explain font properties.
11.	Write CSS code to explain list properties.

12.	Write CSS code to explain table properties.
13.	Write CSS code to explain box model.
14.	Write a JavaScript program to show the use of window object methods(alert(), Confirm(), prompt())
15.	Write a JavaScript program to output text (inner HTML, write ()).
16.	Write a JavaScript program to show the use of onclick() event.
17.	Write a JavaScript program to validate a form.
18.	Write a PHP program to use arithmetic operator.
19.	Write a PHP program to find largest from 3 numbers.
20.	Create a script using for loop to add all the integer between 0 and 30 and display the total.
21.	Write a recursive function to calculate the factorial of a number in PHP.
22.	Write a PHP program using any five string function.
23.	Write a PHP program using any five array function.
24.	Write a PHP program using foreach loop in Associative array.
25.	Write a PHP program to access data from multivalue field.
26.	Write a PHP program to upload an image file.
27.	Write a PHP program to create session and cookie
28.	Write a PHP Program to insert and retrieve data from MySQL database.
29.	Write an WordPress program to check person can vote or not
30.	Design a simple webpage in WordPress
	DBMS(SQL)
31.	**1. Using the following database,** **Colleges (cname, city, address, phone, afdate)** **Staffs (sid, sname, saddress, contacts)** **Staffjoins (sid, ename, dept, DOJ, post, salary) Teachings (sid, class, paperid, fsession, tsession)** **Subjects (paperid, subject, paperno, papername)** **Write SQL statements for the following –** a) Create the above tables with the given specifications and constraints. b) Insert about 10 rows as are appropriate to solve the following queries. c) List the names of the teachers teaching computer subjects. d) List the names and cities of all staff working in your college. e) List the names and cities of all staff working in your college who earn more than 15,000

32.	**2. Using the following database,** **Colleges (cname, city, address, phone, afdate)** **Staffs (sid, sname, saddress, contacts)** **StaffJoins (sid, cname, dept, DOJ, post, salary)** **Teachings (sid, class, paperid, fsession, tsession)** **Subjects (paperid, subject, paperno, papername)** **Write SQL statements for the following -** a. Find the staffs whose names start with 'M' or 'R' and ends with 'A' and/or 7 characters long. b. Find the staffs whose date of joining is 2005. c. Modify the database so that staff N1 now works in C2 College. d. List the names of subjects, which TI teaches in this session or all sessions.
33.	**3. Using the following database** **Colleges (cname, city, address, phone, afdate)** **Staffs (sid, sname, saddress, contacts)** **StaffJoins (sid, cname, dept, DOJ, post, salary)** **Teachings (sid, class, paperid, session, tsession)** **Subjects (paperid, subject, paperno, papername)** **Write SOL statements for the following -** a. Find the colleges who have most number of staffs. b. Find the staffs that earn a higher salary who earn greater than average salary of their college. c. Find the colleges whose average salary is more than average salary of C2 d. Find the college that has the smallest payroll. e. Find the colleges where the total salary is greater than the average salary of all colleges.
34.	**4. Using the following database** **Colleges (ename, city, address, phone, afdate)** **Staffs (sid, mname, saddress, contacts)** **Staffioins (sid, cname, dept, DOJ, post, salary)** **Teachings (sid, class, paperid, fsession, tsession)** **Subjects (paperid, subject, paperno, papername)** **Write SQL statements for the following -** a. Find all staff that do not work in same cities as the colleges they work. b. List names of employees in ascending order according to salary who are working in your college or all colleges. c. Create a view having fields sname, ename, dept, DOJ, and post d. Create a view consisting of ename, average salary and total salary of all staff in that college. e. Select the colleges having highest and lowest average salary using above views.
35.	**5.Using the following database,** **Enrollment (enrollno, name, gender, DOB, address, phone)** **Admission (admno, enrollno, course, yearsem, date, name)** **Colleges (ename, city, address, phone, afdate)** **FeeStructure (course, yearsem, fee)** **Payment (billno, admno, amount, pdate, purpose)** **Write SOL statements for the following -** a. Create the above tables with the given specifications and constraints. b. Insert about 10 rows as are appropriate to solve the following queries. c. Get full detail of all students who took admission this year class wise d. Get detail of students who took admission in Bhilai colleges. d. e. Calculate the total amount of fees collected in this session i) By your college ii) By each college iii) By all colleges

PGDCA-110: Practical based on PGDCA-108

Class-PGDCA-II Semester
Subject: E-commerce & Accounting with Tally
PGDCA 110- Practical based on PGDCA-108

1. Scheme of Examination:

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

Program 1	-	**20**
Program 2	-	**20**
Program 3	-	**20**
Viva-Voice	-	**20**
[Practical Copy + Internal Record]	-	**20**
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 similar types of programs should be prepared.

Practical List:

1. Journal Entries:
- a) Record the following transactions:
  - i. Sold goods worth ₹50,000 to XYZ Enterprises. Received 50% payment via cheque.
  - ii. Paid rent expense of ₹10,000 by cash.
  - iii. Purchased machinery worth ₹1,00,000 on credit from ABC Suppliers.

2. Ledger Maintenance:
- a) Create ledger accounts for the following:
  - i. Furniture
  - ii. Salary Expense
  - iii. Capital Account

3. Perform shortcut key for :How to go to list of Ldgers

4. Trial Balance & Final Accounts:
- a) Prepare a trial balance from the ledger accounts created in question 2.
- b) Prepare trading and profit & loss account for the following information:
  - i. Sales: ₹2,00,000
  - ii. Purchases: ₹1,50,000
  - iii. Rent Expense: ₹10,000
  - iv. Salary Expense: ₹20,000
- c) Prepare a balance sheet considering the capital account balance as ₹1,50,000.

5. Recording Purchases, Sales, Receipts, and Payments:
- a) Record the following transactions:
  - i. Purchased goods worth ₹30,000 from LMN Traders on credit.
  - ii. Sold goods worth ₹40,000 to ABC Corporation. Received 60% payment via bank transfer.
  - iii. Received ₹15,000 from debtors.
  - iv. Paid electricity bill amounting to ₹5,000 by cheque.

6. Creating Vouchers:
- a) Create the following vouchers:
  - i. Sales voucher for selling goods worth ₹60,000 to PQR Enterprises.
  - ii. Purchase voucher for purchasing office supplies worth ₹20,000 from DEF Suppliers.
  - iii. Contra voucher for depositing ₹10,000 cash into the bank account.

7. Perform shortcut key for: Open the Calculator within Tally Prime.

8. Bank Reconciliation:
- a) Perform bank reconciliation for the following scenario:
  - i. Bank statement shows a balance of ₹1,20,000.
  - ii. Tally Prime ledger shows a balance of ₹1,35,000.
  - iii. Outstanding cheques total ₹15,000.

9. Perform shortcut key for: Create a voucher & Save a voucher.

10. Transactions Other Than Purchase and Sales:

a) Record the following miscellaneous transactions:

i. Paid insurance premium of ₹7,000 by cheque.

ii. Received interest income of ₹3,000 credited directly to the bank account.

11. Exporting Reports:

a) Export the trial balance prepared in question 3 to MS Excel format.

12. Creating GST Invoices:

a) Create a GST invoice for selling goods worth ₹80,000 to LMN Traders, including 18% GST.

13. Perform shortcut key for: View the Group Summary report.

14. Stock Management:

a) Add a new item "Laptop" to the inventory with an opening stock of 10 units.

b) Delete the item "Printer" from the inventory.

c) Modify the existing item "Chair" to adjust the selling price to ₹500.

15. Perform find/search function to find a particular amount or a narration.