

P.K.R ARTS COLLEGE FOR WOMEN

(Accredited with 'A' Grade by NAAC)

An Autonomous Institution – Affiliated to Bharathiar University

No.:21 Pariyur Road, Gobichettipalayam – 638 476.

Department of Computer Science

POST GRADUATE DIPLOMA IN COMPUTER APPLICATION

BOARD OF STUDIES

for the candidates admitted from the Academic Year 2021-2022 and onwards

Under CBCS PATTERN



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POST GRADUATE DIPLOMA IN COMPUTER APPLICATIONS
 Course Scheme and Scheme of Examinations (Regular Stream)
 (For students admitted from 2021-22& onwards)

Part	Category	Course Code	Title of the Course	ContactHrs/ week	Exam Duration hrs.	Max. Marks			Credits
						CIA	ESE	Total marks	
I – SEMESTER									
III	Paper - I	21PGDCA01	Introduction to Information Technology	6	3	50	50	100	4
III	Paper -II	21PGDCA02	Operating System	6	3	50	50	100	4
III	Paper -III	21PGDCA03	Programming in C	6	3	50	50	100	4
III	Paper -IV	21PGDCA04	Office Automation - Lab	6	3	50	50	100	4
III	Paper -V	21PGDCA05	Programming in C - Lab	6	3	50	50	100	4
			TOTAL	30				500	20
II – SEMESTER									
III	Paper -VI	21PGDCA06	Networking Fundamentals	6	3	50	50	100	4
III	Paper -VII	21PGDCA07	Web Technology	6	3	50	50	100	4
III	Paper -VIII	21PGDCA08	Relational Database Management Systems	6	3	50	50	100	4
III	Paper - IX	21PGDCA09	Networking and Web Programming – Lab	6	3	50	50	100	4
III	Paper- X	21PGDCA10	RDBMS using Oracle - Lab	6	3	50	50	100	4
			TOTAL	30				500	20

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Head, Department of Computer Science
 P.K.R. Arts College for Women (Autonomous)
 Gobichettipalayam - 638476.

Category	Course Type	Course Code	Course Title	Contact Hours	Credit (C)
Paper I	Core : I	21PGDCA01	INTRODUCTION TO INFORMATION TECHNOLOGY	72	4

Contact hours per semester: 72

Contact hours per week: 6

Year	Semester	Internal Marks	External Marks	Total Marks
I	I	50	50	100

Preamble

To learn about basic computers, Ms-Word, Ms-Excel, Ms-Powerpoint and Internet applications

Course Outcomes

On the successful completion of the course, students will be able to

COs	Course Outcome	Knowledge Level (RBT)
CO1	Enumerate the concepts of computers, Ms-office and Internet Applications	K1
CO2	explain the process of computers and Ms-Office utilities	K2
CO3	Utilise the functions of different generation of computers and Ms-office functions with Internet options	K3
CO4	Infer the options of Utilities and characteristics of computers	K4
CO5	Elucidate Ms-Word, Ms-Excel, Ms-Powerpoint functions and operating system functions	K5
CO6	Design and develop real –time applications using Ms-Office	K6

K1 – Remember; K2 – Understand; K3 – Apply; K4 – Analyze;
K5 – Evaluate; K6 – Create.

Category	Course Type	Course Code	Course Title	Contact Hours	Credit (C)
Paper - II	Core : II	21PGDCA02	OPERATING SYSTEM	72	4

Contact hours per semester: 72

Contact hours per week: 6

Year	Semester	Internal Marks	External Marks	Total Marks
I	I	50	50	100

Preamble

To learn about basic operating system abstractions, mechanisms and their implementations

Course Outcomes

On the successful completion of the course, students will be able to

Cos	Course Outcome	Knowledge Level (RBT)
CO1	Recall the Operating System concepts	K1
CO2	Describe all functions of operating system and I/O Management	K2
CO3	Apply the operating system operations	K3
CO4	analyse I/O devices and files	K4
CO5	Judge types of operating systems and distributed systems	K5
CO6	Construct and discuss the function and process of operating system	K6

K1 – Remember; K2 – Understand; K3 – Apply; K4 – Analyze;
K5 – Evaluate; K6 – Create.

Category	Course Type	Course Code	Course Title	Contact Hours	Credit (C)
Paper - III	Core : III	21PGDCA03	PROGRAMMING IN C	72	4

Contact hours per semester: 72

Contact hours per week: 6

Year	Semester	Internal Marks	External Marks	Total Marks
I	I	50	50	100

Preamble

To learn about the Computer fundamentals and the C programming language concepts

Course Outcomes

On the successful completion of the course, students will be able to

Cos	Course Outcome	Knowledge Level (RBT)
CO1	Recall the concepts of C Language	K1
CO2	Explain operators, decision making statements and other programming concepts	K2
CO3	Illustrate all functions of C Language with programs	K3
CO4	Analyze the different concepts of C language with examples	K4
CO5	Find errors in programs in C language	K5
CO6	Develop and solve real time problems using C Programming language	K6

K1 – Remember; K2 – Understand; K3 – Apply; K4 – Analyze;
K5 – Evaluate; K6 – Create.

Category	Course Type	Course Code	Course Title	Contact Hours	Credit (C)
Paper - IV	Core : IV	21PGDCA04	OFFICE AUTOMATION – LAB	72	4

Contact hours per semester: 72

Contact hours per week: 6

Year	Semester	Internal Marks	External Marks	Total Marks
I	I	50	50	100

Subject Description: This course provides hands on experience on Office Automation

Goal: To enable the students to develop the skill in Ms- Office

Objectives: On successful completion of the course the students will understand the concepts of Ms-Office and expertise in using Internet Applications

Cos	Course Outcome	Knowledge Level (RBT)
CO1	Recall the concepts of Ms-office and Internet Applications	K1
CO2	Explain the Ms-Office utilities and accounting features	K2
CO3	Demonstrate the functions of Ms-office with Internet options	K3
CO4	Categorize the Ms- Office utilities using programs	K4
CO5	Find errors in Ms-Word, Ms-Excel, Ms-Powerpoint	K5
CO6	Construct real –time applications using Ms-Office	K6

K1 – Remember; K2 – Understand; K3 – Apply; K4 – Analyze;
K5 – Evaluate; K6 – Create.

Practical List

1. Type a paragraph and use Editing options —Inserting —Deleting —Cut, Copy, paste —Undo, Redo —Find, Search, Replace
2. Design an invitation using page borders and images.
3. Create a Table use the following options (Borders, Alignments, Insertion, deletion, Merging, Splitting, Sorting)
4. Using Mail Merge - create a letter format and send to the students the exam timetable.
5. Computing data using Ms-Excel
 1. Finding total in a column or row
 2. Mathematical operations (Addition, Subtraction, Multiplication, Division, Exponentiation)
6. Create a Chart to display the student performance in academics.
7. Create a table using table design in Ms-Access
8. Design a presentation for a new product launch in the market.
9. Design a presentation using animations and transitions effects.
10. Create a company in Tally
11. Create ledgers using tally
12. Create vouchers for the ledgers

Category	Course Type	Course Code	Course Title	Contact Hours	Credit (C)
Paper - V	Core : V	21PGDCA05	PROGRAMMING IN C – LAB	72	4

Contact hours per semester: 72

Contact hours per week: 6

Year	Semester	Internal Marks	External Marks	Total Marks
I	I	50	50	100

Subject Description: This course provides hands on experience on C Programming

Goal: To enable the students to develop software in C language

Objectives: On successful completion of the course the students will understand the concepts of C language and expertise in using C

Cos	Course Outcome	Knowledge Level (RBT)
CO1	Recall the concepts of C Language	K1
CO2	Explain operators, decision making statements and other programming concepts	K2
CO3	Illustrate all functions of C Language with programs	K3
CO4	Analyze the different concepts of C language with examples	K4
CO5	Find errors in programs using C language	K5
CO6	Develop and solve real time problems using C structures and functions	K6

K1 – Remember; K2 – Understand; K3 – Apply; K4 – Analyze;
K5 – Evaluate; K6 – Create.

Practical List

1. Write a C program to find the sum and average for given numbers.
2. Write a C program to find the prime numbers.
3. Write a C program to find the factorial of a given number.
4. Write a C program to generate Fibonacci series.
5. Write a C program to sort the given set of numbers in ascending order.
6. Write a C program to find whether the given number is even or odd.
7. Write a C program to check whether the given string is palindrome or not.
8. Write a C program using the concept of switch case.
9. Write a C program using functions.
10. Write a C program using Structures.

SEMESTER – II

Category	Course Type	Course Code	Course Title	Contact Hours	Credit (C)
Paper -VI	Core : VI	21PGDCA06	NETWORKING FUNDAMENTALS	72	4

Contact hours per semester: 72

Contact hours per week: 6

Year	Semester	Internal Marks	External Marks	Total Marks
I	I	50	50	100

Preamble

To understand the concepts and design of Computer Networks

Course Outcomes

On the successful completion of the course, students will be able to

Cos	Course Outcome	Knowledge Level (RBT)
CO1	Outline the overview of OSI model and Layers	K1
CO2	Explain the concept of seven layers and its working	K2
CO3	Apply protocols and algorithms in appropriate layers	K3
CO4	Summarize the technical trends in of computer networking	K4
CO5	Evaluate the challenges in building networks and solutions	K5
CO6	Discuss the key technological components of the network	K6

K1 – Remember; K2 – Understand; K3 – Apply; K4 – Analyze;
K5 – Evaluate; K6 – Create.

Category	Course Type	Course Code	Course Title	Contact Hours	Credit (C)
Paper- VII	Core : VII	21PGDCA07	WEB TECHNOLOGY	72	4

Contact hours per semester: 72

Contact hours per week: 6

Year	Semester	Internal Marks	External Marks	Total Marks
I	I	50	50	100

Preamble

To enable the students to learn the concepts of web technologies

Course Outcomes

On the successful completion of the course, students will be able to

Cos	Course Outcome	Knowledge Level (RBT)
CO1	Describe the concept of Internet applications and dealing with web designing languages	K1
CO2	Derive the structure of Web Architecture using HTML, XML and WAP	K2
CO3	Apply the HTML and XML tags to develop a web page	K3
CO4	Analyze the insight on dynamic web pages and other programming languages	K4
CO5	assess the needsof WAP and XML and how it differs from static web page	K5
CO6	Develop real time web applications using HTML and XML	K6

K1 – Remember; K2 – Understand; K3 – Apply; K4 – Analyze;
K5 – Evaluate; K6 – Create.

Category	Course Type	Course Code	Course Title	Contact Hours	Credit (C)
Paper - VIII	Core : VIII	21PGDCA08	RDBMS & ORACLE	72	4

Contact hours per semester: 72

Contact hours per week: 6

Year	Semester	Internal Marks	External Marks	Total Marks
I	I	50	50	100

Preamble

To enable the students to learn about the concepts of database system and manipulation of data

Course Outcomes

On the successful completion of the course, students will be able to

Cos	Course Outcome	Knowledge Level (RBT)
CO1	Remember the basic concepts of database system	K1
CO2	Describe the implementation concepts using syntax in relational database	K2
CO3	Demonstrate the DML statements and DDL statements	K3
CO4	Classify PL/SQL programs with different operations using Database syntaxes	K4
CO5	Summarize all PL/SQL statements with syntax	K5
CO6	Generalize the function of cursors and PL/ SQL statements	K6

K1 – Remember; K2 – Understand; K3 – Apply; K4 – Analyze;
K5 – Evaluate; K6 – Create.

Category	Course Type	Course Code	Course Title	Contact Hours	Credit (C)
Paper- IX	Core : IX	21PGDCA09	Networking and Web Programming – Lab	72	4

Contact hours per semester: 72

Contact hours per week: 6

Year	Semester	Internal Marks	External Marks	Total Marks
I	I	50	50	100

Subject Description: This course provides hands on experience on networking and Web Programming

Goal: To enable the students to work effectively with Networking and Web Programming concepts

Objectives: On successful completion of the course the students will be able to build system architecture and networking and web programming options.

Cos	Course Outcome	Knowledge Level (RBT)
CO1	identify the network commands, HTML commands	K1
CO2	Classify the network commands and HTML tags	K2
CO3	Apply different procedures to configure networks and illustrate web page commands	K3
CO4	Analyze the file information in network and background tags with images in HTML	K4
CO5	Compare the network commands in different networks and find errors in HTML tags	K5
CO6	Construct HTML procedures for webpage creation and configure different types of networks	K6

K1 – Remember; K2 – Understand; K3 – Apply; K4 – Analyze;
K5 – Evaluate; K6 – Create.

Practical List

1. Study of basic network command and Network configuration commands.
2. Write a procedure to share a file in a network
3. Write a program to send Good Morning Message through LAN Network
4. Write a procedure to create, copy, rename the folders in a system
5. Write a procedure to print a document in the system
6. Write a procedure to create an electronic mail and send a mail to the user
7. Write a some commands in HTML
8. Write a procedure to insert background color and marquees in HTML
9. Write a procedure to insert images in the webpage
10. Write a procedure to create simple webpage

Category	Course Type	Course Code	Course Title	Contact Hours	Credit (C)
Paper - X	Core : X	21PGDCA10	RDBMS & Oracle – Lab	72	4

Contact hours per semester: 72

Contact hours per week: 6

Year	Semester	Internal Marks	External Marks	Total Marks
I	I	50	50	100

Subject Description: This course provides hands on experience on PL/SQL Programming and Oracle

Goal: To enable the students to work effectively with PL/SQL and Oracle

Objectives: On successful completion of the course the students will be able to build real world applications using PL/SQL and Oracle

Cos	Course Outcome	Knowledge Level (RBT)
CO1	Recall the basic concepts of database system	K1
CO2	Illustrate the features available in a RDBMS package	K2
CO3	Construct appropriate DDL and DML queries for database manipulation	K3
CO4	Analyse database requirements to design database	K4
CO5	Assess data in tables against appropriate constraints	K5
CO6	Build simple solutions to real world problems using SQL queries	K6

K1 – Remember; K2 – Understand; K3 – Apply; K4 – Analyze;
K5 – Evaluate; K6 – Create.

Practical List

1. Create a table "Company" with the following fields and insert the values for 10 employees.

Field Name	Field Type	Field size
Company Name	Character	15
Proprietor	Character	15
Address	Level of Correlation : 0 – Nil; 1 –Low; 3 – Medium; 9 – High	
As per UGC Notification	Character	25
Supplier Name	Character	15
No of employees	Number	4
GP Percent	Number	6 with 2 decimal places

2. Using the above table display the Results:

- Display all the records of the company which are in the ascending order of GP percent.
- Display the name of the company whose supplier name starts with "T".
- Display the details of the company whose GP percent is greater than 20 and order by GP Percent.
- Display the detail of the company having the employee ranging from 300 to 1000.
- Display the name of the company whose supplier is same as the Tata's.

3. Create a table named "Student" with the following fields and insert the values.

Field Name	Field Type	Field Size
Student Name	Character	15
Student Code	Number	6
Address	Character	25
Course Name	Character	15
Percentage	Number	4 with 2 decimal places

Insert the appropriate values in the table.

4. Using the above table display the Results:

- Display the average percentage of students.
- Display the names of the students whose percentage is greater than 80.
- Display the details of the student who got the highest percentage.
- Display the details of the students whose percentage is between 50 and 70.
- Display the details of the students whose percentage is greater than the percentage of the roll no=17CA01

5. Create a Table Publisher and Book with the following fields:

Field Name	Field Type	Field Size
Publisher Code	VarChar	5
Publisher Name	VarChar	10
Publisher city	VarChar	12
Publisher State	VarChar	10
Title of book	VarChar	15
Book Code	VarChar	5
Book Price	VarChar	5

Use DML commands

6. Using the above table display the Results

- b) Insert the records into the table publisher and book.
- c) Describe the structure of the tables.
- d) Show the details of the book with the title "DBMS".
- e) Show the details of the book with price>300.
- f) Show the details of the book with publisher name "PHI".

7. Using the above table display the Results

- a) Select the book code, book title, publisher city is "Delhi".
- b) Select the book code, book title and sort by book price.
- c) Count the number of books of publisher starts with "BalaGurusamy".
- d) Find the name of the publisher starting with "S".

8. Write a PL/SQL Program to add two numbers

9. Write a PL/SQL program to display ODD or EVEN numbers

10. Write a PL/SQL program to generate Fibonacci number.