GOVT. DIGVIJAY AUTONOMOUS P.G. COLLEGE

RAJNANDGAON (C.G.)

ACINFT01

DEPARTMENT OF COMPUTER SCIENCE

SYLLABUS

OF

Add On Course

B.Sc.(Information Technology)

SESSION- 2019-20 /2020-21

GOVT. DIGVIJAY AUTONOMOUS P.G. COLLEGE

RAJNANDGAON (C.G.)

DEPARTMENT OF COMPUTER SCIENCE

Session 2019-20/2020-21

List of Members of Board of Studies

S.No.	Name of Member	Nominee Type	Signature
1.	Mr. Raju Khunttey	Chairman	07.09.19
2.	Prof. L.K. Gavel	V.C. Nominee	07/9/19
3.	Dr. Vinod Patle	Principal Nominee	
4.	Prof. Santosh Kumar Miri	Principal Nominee	7/9/19
5.	Mr. Bhism Dewangan	Adviser Member	
6.	Miss T. Ankita Rao	Ex-Student	

Department of Computer Science
2019-20/2020-21

INFORMATION TECHNOLOGY

Add-on Course-Information Technology
Eligibility for B.Sc. Students-

OBJECTIVES

The benefits of career-oriented can be extended to regular students. Education plays very vital in each and every aspect of life. The aim of college is to bring the quality education to the students in every aspect of life with view and looking at the future of the Information Technology.

Details of Add-on course (Certificate/Diploma/Advance Diploma)

1. The Course will be of 20 credits is equal to 200 marks.
2. Paper -1 will be 75 marks = 6 credits.
3. Paper -2 will be 75 marks = 6 credits.
4. Field work/Project work/Training/Practical & Viva will be 50 Marks = 8 credits.
5. Field work & Training on IT will be 10 marks.
6. Project work will be 10 marks.
7. Practical marks will be 25 marks.
8. Viva will be 5 marks.
9. Each credit will have 15 hrs. Of workload out of which 8 credits should be field work/project work/training/Practical and Viva on IT.
10. Each Theory Paper will be 6 credits i.e 2*6 =12 credits for 2 papers.
11. Each Unit will be 1.2 credits
12. Each credit will have 15 hrs. Of workload.
13. 8 credits will be field work/project work/training/practical i.e. 8*15 hrs. = 120hrs.
14. Paper I & Paper 2 will be 90 hrs. For each unit = 90/5 = 18 hrs.

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ACINFT-01

INFORMATION TECHNOLOGY

2019-20/2020-21

Add-on Course-Information Technology

Eligibility for B.Sc. Students Along with B.Sc.-I

Paper-1

Fundamental of IT & PC Software

Final Year	**:**	**Certificate Course**	**Total Marks=75**
Theory Paper			**(6 Credits)**
Paper-1	**:**	**Fundamental of IT & PC Software**	INFTT101

Unit-1 Introduction to Computer and its Concept, General architecture of computer. Usage and benefits of computer, Application of computer. Input and output devices.

Unit-2 **Introduction to Power Point:** Creating a presentation, Modifying Visual Elements, Adding objects, Applying. Transitions, animations and linking, Preparing handouts presenting slide show.

Unit-3 Introduction to Windows, feature of Windows, Windows hardware requirement for running various version of windows. Window Accessories –Calculator, Notepad, WordPad, Paint, My Computer, Recycle bin, Task bar, Desktop. Types and anatomy of windows, using program manager, creating and using file manager accessories.

Unit-4 Introduction Word Processing, Advantages of MS word Processing, Introduction to installation. Editing a file using paragraph style. Newspaper style columns using macros advance word processing header & footer, finding text setting up printer. Mail Merge and other application, mathematical calculator. Table handling.

Unit-5 Introduction to Spreadsheet, Defining and Advantages of Electronics Worksheet, working on spreadsheet, range and related operations. Setting saving erasing a worksheet in graph creation, Types of graph, creating chart sheet 3D. column charts moving and changing the size of chart printing the chart.

TEXT & REFERENCE BOOK-

1. **PC Software -Ravi Taxli**
2. **Computer Fundamental -P.K.Sinha**
3. **Computer Fundamental -Nagp**

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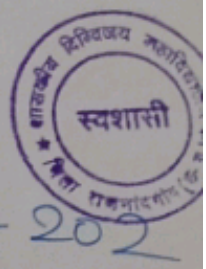
INFORMATION TECHNOLOGY

2019-20 /2020-21

Add-on Course-Information Technology
Eligibility for B.Sc. Students Along with B.Sc.-II

Paper-2

Object Oriented Programming in C++



Final Year : Diploma Course **Total Marks=75**
Theory Paper **(6 Credits)**
Paper- 2 : Object Oriented Programming in C++

INFTT - 202

Unit-1	Introduction to object-Oriented Programming(OOP), Advantages of OOP, The object-oriented approach, Concept or features of Object Oriented Programming: Object, Classes, Inheritance, Reusability, Polymorphism, Encapsulation, Data abstraction & Data biding, Difference between procedure oriented Programming Vs Object- oriented programming.
Unit-2	Object Classes & its declaration, Using the class. Inside or side method of class declaration, Nesting of class, Function types , User defined function, Object as a function argument, using array as class members, Control structure like of else nested if…..else, switch case, and other looping statements like for loop, while loop, do while loops with example.
Unit-3	Constructor & Destructors, using constructor's will all its types copy constructer, Parameterized constructor and default constructer & destructors, passing arguments in function passing constant passing value reference argument returning by reference Inline function, function overloading .
Unit-4	Inheritance with all its type, multiple inheritances, multilevel with all its type and hybrid multiple inheritance static member function, friend function Base class, derived class Access specifies protected string.
Unit-5	Operator overloading & Pointer, Pointer: & and * Operator pointer variables, Pointer to Pointer, void pointer, pointer and array pointer & function, pointer to object, pointer & string, virtual function virtual member function operator overloading.

REFERENCE TEXT BOOKS

1. Programming in C++ : E. Balagruswami
2. Mastering in C++ : Venu Gopal
3. Let us C++ : Y.Kanetkar

PRACTICAL WORK

1. The sufficient practical work should be done for understanding the paper.
2. At least five programs on each unit from unit-II to unit-V be prepared.
3. All practical works should be prepared in from of point outs & be evaluated while practical Examination.

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ACINFT 03

INFORMATION TECHNOLOGY

2019-20 / 2020-21

Add-on Course-Information Technology
Eligibility for B.Sc. Students Along with B.Sc.-III

Paper-1

Digital Organization & Architecture

Final Year : Advanced Diploma Course

Theory Paper

Paper-1 : Digital Organization & Architecture **Total Marks=75**

(6 Credits)

INFTT 30

स्वशासी

Unit-1	Combination & Sequential circuits, Half adder & Full adder, Full subtractor, Multiplexer and De-multiplexer, RAM & ROM working.
Unit-2	Sequential logic-Flip Flops-RD,D,JK & T-flip Flop, Registers, counters, shift register, Bidirectional register, Synchronous counter, Encoder and Decoder.
Unit-3	Central Processing Unit-Introduction, General Register organization, stack organization, data transfer and manipulation-data transfer instruction, data manipulation instruction, shift instruction, RISC.
Unit-4	Input/output organization-Peripheral devices, Input-Output Interface, Asynchronous data transfer, modes of transfer, Direct Memory Access.
Unit-5	Microprocessor-Introduction, 8085 block diagram and its function, addressing modes, Microprocessor Instruction set and computer language, Data transfer modes.

TEXT & REFERENCE BOOK-

1. Digital organization and Architecture : By Morris Mano
2. Microprocessor Architecture, Programming & Application with the 8085 : By ramesh S.Gaonkar

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INFORMATION TECHNOLOGY
2019-20 /2020-21

Add-on Course-Information Technology
Eligibility for B.Sc. Students Along with B.Sc.-III

Paper-2

Fundamental of Data Structure

स्वशासी

Final Year	:	**Advanced Diploma Course**	**Total Marks=75**
Theory Paper			**(6 Credits)**
Paper-2	:	**Fundamental of Data Structure**	INFTT-302

Unit-1	Introduction to Data Structure-The concept of Data structure, Abstract data structure , Analysis of Algorithm. Stack and Queues –Introduction to stack, Stack application –Infix ,Post fix, primitive operations on stack, Introduction to queues, primitive operations on the queue, circular queue, De-queue.
Unit-2	Linked list-Introduction to the linked list, linked list, of stack, linked list of queue, doubly linked list.
Unit-3	Trees- Basic terminology, Binary trees, tree representation as array, Traversal of binary trees- In order, Pre Order & Post Order, Threaded Binary tree, & Height balanced representation of B+ & B* trees.
Unit-4	Searching & Sorting- Sequential search, Binary search, Insertion Sort, selection sort, quick sort, bubble sort, heap sort.
Unit-5	Tables & Graphs-Hash table, collection resolution techniques, Introduction to graph, terminology, graph traversal Depth first and Breadth first search.

TEXT & REFERENCE BOOK-

1. Fundamentals of Data structure: By S. Sawhney & Horowith.
2. Data structure : By Trembly & Sorrenson

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