CHANDRAKANTI RAMAWATI DEVI ARYA MAHILA P.G. COLLEGE
चन्द्रकान्ति रमावती देवी आर्य महिला पी.जी. कालेज
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दीवान बाजार, गोरखपुर (उत्तर प्रदेश)

Mobile No-+91-9076651662   Mail ID- crdpgcollege.gkp@gmail.com
Address: New Colony, Diwan Bazar Gorakhpur -273001

FUNDAMENTAL OF COMPUTING
DEPT:-COMPUTER DEPARTMENT
Course Code:-VAC2005   Duration:-15 Days
Syllabus and programe schedule

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FUNDAMENTALS OF COMPUTING

SESSION 2019-20

DURATION 15 DAYS (30 Hours)

CONTACT:- MR SHANKAR (MOB-7905374579)

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INTRODUCTION

The Value Added Course On Fundamemntal Of Computing Will Be For 30 Hours And Conducted Through Ofline Mode.

It Aims To Provide Proper Environment To Th Students With Regards To Fundamental Of Computing ..

COURSE OUTCOME

Paper: Introduction to Computer Programming Introduction:

CO.1 To know about Digital Computer, Major Components of digital computer, Hardware, Software, Software & Firmware, Computer Application in various fields of science and managements. Data Representation:

CO.2 To learn Decimal and binary number system, Decimal-binary conversion, Octal number system, Hexadecimal, BCD number, Binary arithmetic, Alphanumeric representation, Complements, r and (r1)'s complements, Fixed point and floating point representation.

CO.3 To create algorithm, flowchart, data flow diagram.

CO.4 To solve the concept of programming related to real life problems in 'C' operations. Paper: Digital Circuits & Logic:

CO.1 To learn about Logic gates, Boolean algebra, Combinational Circuits: Half adder, Full adder, Flip flops – RS flip-flop, D- flip-flop,

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JK, T flip flop, Edge- triggered flip flop, Encoders, Decoders, multiplexers, Registers – shift register, buffer register counters.

CO.2 To solve the basic problems of Karnaugh Maps.

CO.3 To learn about Instruction code, direct & indirect addresses, Timing and control signals, Instruction cycle, memory reference Instruction, I/O Instructions.

CO.4 Tosolve the problems based on addition and subtraction with signed magnitude data, multiplication algorithms & Booth algorithm, hardware algorithm.

CO.5 To implement the concept of Time window and slope converters, Tracking A/D and successive approximation converters, Digital to analog converters, LED and LCD display, seven segment display. Paper: Operating System

CO.1 the students learn the concept of paging, segmentation, demands paged allocation. Processor Management: State models, Job schedulers, Process scheduling, Job and process synchronization, Race condition, deadlocks, Deadlock detection, recovery & prevention.

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PROGRAMME OUTCOME

PO1: Apply knowledge of mathematics, science and algorithm in solvingcomplex Computer engineering problems.

PO2: Generate solutions by conducting experiments and applyingtechniques to analyze and interpret data

PO3: Design component, or processes to meet the needs within realisticconstraints.

PO4: Identify, formulate, and solve Software Engineering, Networking. PO5: Comprehend professional and ethical responsibility in computing profession.

PO6: Express effective communication skills.

PO7: Participate in global, economic, environmental, and societal context. PO8: Recognize the need for, and an ability to engage in life-long learning. PO9: Knowledge of contemporary issues and emerging developments in computing profession.

PO10: Function effectively as an individual and as a member or leader indiverse teams and in multidisciplinary settings.

PO11: Design research problems and conduct research in computingenvironment.

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SYLLABUS

Unit-I

Human Computer Interface Concepts of Hardware and Software; Data and Information.

Functional Units of Computer System: CPU, registers, system bus, main memory unit, cache memory, Inside a computer, SMPS, Motherboard, Ports and Interfaces, expansion cards, ribbon cables, memory chips, processors.

Devices: Input and output devices (with connections and practical demo), keyboard, mouse, joystick, scanner, OCR, OMR, bar code reader, web camera, monitor, printer, plotter.

Memory: Primary, secondary, auxiliary memory, RAM, ROM, cache memory, hard disks, optical disks.

Data Representation: Bit, Byte, Binary, Decimal, Hexadecimal, and Octal Systems, Conversions and Binary Arithmetic (Addition/ Subtraction/ Multiplication) Applications of IT.

Unit-II

Concept of Computing, Types of Languages: Machine, assembly and High level Language; Operating system as user interface, utility programs. Word processing: Editing features, formatting features, saving, printing, 10 BCA 1 –IT www.sbs.ac.in 3 | Page table handling, page settings, spell-checking, macros, mail-merge, equation editors.

Unit-III

Spreadsheet: Workbook, worksheets, data types, operators, cell formats, freeze panes, editing features, formatting features, creating formulas, using.

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ASSESSMENT METHOD

Creating a 15-day program on the "Assisted Method of Fundamentals of Computer" can be structured to cover essential topics while providing practical hands-on experience. Here's a proposed outline

:Day 1: Introduction to Computers

- Overview of computer systems (hardware/software)
- Understanding computer components
- Types of computers (desktop, laptop, tablets, etc.)

Day 2: Operating Systems

- Introduction to operating systems (OS)
- Functions of an OS
- Exploring Windows and Linux basics

Day 3: File Management

- Understanding file systems
- Creating, saving, and organizing files and folders
- Introduction to cloud storage

Day 4: Word Processing Basics

- Introduction to Microsoft Word/Google Docs
- Formatting text and paragraphs
- Inserting images and tables

Day 5: Advanced Word Processing

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- Using templates and styles
- Creating and formatting reports
- Introduction to mail merge

Day 6: Spreadsheets Fundamentals

- Introduction to Microsoft Excel/Google Sheets
- Basic formulas and functions
- Creating charts and graphs

Day 7: Advanced Spread sheets

- Using pivot tables
- Data analysis tools
- Conditional formatting and advanced functions

Day 8: Presentations

- Introduction to Microsoft PowerPoint/Google Slides
- Designing effective presentations
- Using animations and transitions

Day 9: Internet Basics

- Understanding the internet and web browsers
- Safe browsing practices
- Introduction to online research

Day 10: Email and Communication Tools

- Setting up and managing an email account
- Understanding email etiquette

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- Introduction to communication tools (e.g., Zoom, Teams)

Day 11: Introduction to Programming Concepts

- Basic programming concepts (variables, loops, functions)
- Introduction to a beginner-friendly programming language (e.g., Python)

Day 12: Practical Programming

- Hands-on exercises in Python
- Simple project (e.g., calculator, quiz app)

Day 13: Data Management Basics

- Introduction to databases
- Understanding data entry and basic queries
- Overview of database software (e.g., MS Access)

Day 14: Cyber security Awareness

- Understanding basic cyber security principles
- Safe online practices and protecting personal information
- Recognizing phishing and other online threats

Day 15: Review and Practical Assessment

- Recap of all topics covered
- Practical assessment through hands-on tasks
- Feedback session and Q&A

Methodology

- **Interactive Lectures:** Brief lectures introducing each topic.

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- **Hands-On Activities:** Practical sessions to apply learned skills.
- **Group Projects:** Collaborative activities to enhance learning.
- **Assessments:** Regular quizzes and a final assessment to evaluate understanding.

Resources Needed

- Computers with internet access
- Software applications (e.g., MS Office, programming tools)
- Projector for presentations
- Learning materials (handouts, guides)

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Place- Computer Lab

Date- 18-08-2020 To 30-08-2020

MINUTES OF MEETING

The development meeting was held on 10-08-2020 following matters were discussed in the meeting.

It was decided that the department will be conducting Fundamental Of Computing .

It was decided that the value added course would be for & 15 days (30 hours)

TEACHERS WHO ATTENDED MEETING

- Dr.Aparna Mishra
- Mrs.Anjali Shukla
- Mr.Shankar Thapa

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ACTIVITY PIC

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ACTIVITY REPORT

Fundamentals of Computing

Period: August 18, 2020 – August 30, 2020

Institution: Chandrakanti Ramawati Devi Arya Mahila PG College, Gorakhpur

OVERVIEW

During the period from August 18 to August 30, 2020, the Fundamentals of Computing course was conducted to enhance students' understanding of basic computing concepts and skills. The program aimed to equip students with essential digital literacy needed for academic and professional success.

ACTIVITIES CONDUCTED

1. **Introduction to Computing (August 18)**

   - Overview of the course objectives.
   - Introduction to computer hardware and software.
   - Discussion on the importance of computing skills in various fields.

2. **Operating Systems (August 20)**

   - Lecture on different types of operating systems (Windows, Linux, macOS).
   - Hands-on session on basic navigation and file management.

3. **Microsoft Office Suite (August 22)**

   - Workshops focused on MS Word, Excel, and PowerPoint.
   - Practical exercises to create documents, spreadsheets, and presentations.

4. **Internet and Web Tools (August 24)**

   - Introduction to web browsing, search engines, and online safety.
   - Activities on using email and collaboration tools like Google Drive.

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5. **Programming Basics (August 26)**
   - o Introduction to basic programming concepts using Python.
   - o Simple coding exercises to develop problem-solving skills.

Data Management (August 28)

- Overview of databases and data management principles.

- Exercises on creating and managing simple databases.

Wrap-up and Assessment (August 30)

- Review of key concepts covered in the course.

- Feedback session and informal assessment through quizzes.

Participation

- Total participants: 30 students

- Attendance rate: 90%

- Students actively engaged in discussions and practical sessions.

Outcomes

- Enhanced understanding of computing fundamentals.

- Improved proficiency in using essential software tools.

- Increased confidence in navigating digital environments.

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गोरखपुर

व्याख्यान पंजिका
Lecture Register

Value Added Course on

विषय Fundamentals of Computing प्रश्न पत्र Course Code VAC 2005

कक्षा .... अनुभाग Computer Dept.

नाम प्रवक्ता ....

सत्र 2019-20

व्याख्यान पंजिका
LECTURE REGISTER

विषय _____ प्रश्न पत्र _____ कक्षा _____ अनुभाग _____

माह __August 2019__

कार्यालय अभिलेख

नाम छात्र/छात्रा	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23

प्रवक्ता के हस्ताक्षर

क्र०सं०	24	25	26	27	28	29	30	31	व्याख्यानों की उपस्थिति			व्याख्यानों में कमी				अधिप्राप्ति

1. मास में दिये गये व्याख्यानों की संख्या........गत मास के अन्त तक दिगये व्याख्यानों की सं०
2. सत्रारम्भ में दिये गये व्याख्यानों की संख्या ....

कार्यालय अभिलेख

मास _____
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विषय _____ प्रश्न_____

क्रम सं०	नाम छात्र/छात्रा
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व्याख्यान पंजिका / LECTURE REGISTER

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																			P		P	A	P	P
1	Raziy Khatoon																		A		P	A	A	A
2	Zareena Khatoon																		P		P	P	P	P
3	Shama Khatoon																		P		A	P	P	A
4	Sonam Kumari																		A		P	P	P	A
5	Nisha Gupta																		P		P	P	P	P
6	Neha Gupta																		P		P	P	P	P
7	Rushika Dubey																		A		P	A	P	P
8	Shruti Paunvyan																		P		P	P	A	P
	Meghna Prajapati																		P		P	P	P	P
9	Ranjeni Nishad																		P	S	P	P	P	P
	Nazbo Khatoon																		P	U	A	P	P	P
	Kaushalu Jhaan																		P	N	P	P	P	A
	Divya Maddheshiya																		P	D	P	P	P	P
	Km. Richa Yadav																		P	A	P	A	P	P
	Ramavati Mayan																		P	Y	P	P	P	P
	Priyanka																		P		P	A	P	P
	Pratibha Prajapati																		P		P	P	P	P
	Neha Kumari																		P		A	P	P	P
	Mamta Mulara																		P		P	P	P	P
	Archana Channa																		A		P	P	P	P
	Jyoti Chaurasiya																		A		P	P	P	P
	Nandani Gupta																		P		P	P	P	A
	Ambika Gupta																		P		A	P	P	P
	Soanya Patel																		P		P	P	P	P
	Priyata Mishra																		P		P	P	A	P
	Sarita Gupta																		A		P	P	P	P
	Poonam Yadav																		A		P	P	P	P

प्रवक्ता के हस्ताक्षर