Department of Computer Science

Bachelor of Computer Application

BCA

CURRICULA

Shri Vaishnav Institute of Management, Indore

Approved by AICTE, New Delhi and Affiliated to DAVV, Indore & RGPV, Bhopal

UGC NAAC 'A' Grade Institute

Scheme No. 71, Gumasta Nagar, Indore

PART A: Introduction				
Program: **Certificate**		Class: **B.C.A.**	Year: **I Year**	Session: **2021-22**

1.	Course Code	S1-BCAA1T	
2.	Course Title	**Computer Fundamentals, Organization and Architecture**	
3.	Course Type (Core Course/Elective/Generic Elective/ Vocational	**Major – Paper I**	
4.	Pre-Requisite (if any)	To study this course, a student must have basic knowledge of Computers.	
5.	Course Learning Outcomes (CLO)	**After the completion of this course, a successful student will be able to :** • Understand the basic structure, operation and characteristics of digital computer. • Design simple combinational digital circuits based on given parameters. • Understand the working of arithmetic and logic unit. • Know about hierarchical memory system including cache memories and virtual memory. • Know the contributions of Indians in the field of computer architecture and related technologies.	
6.	Credit Value	**Theory – 4 Credits Practical - 2 Credits**	
7.	Total Marks	Max. Marks : **25+75**	Min. Passing Marks: **33**

PART B: Content of the Course

No. of Lectures (in hours per week): **2 Hrs. per week**

Total No. of Lectures: **60 Hrs.**

Module	Topics	No. of Lectures
I	**Fundamentals of computers:** Definition, Characteristics, capabilities and limitations. Types of Computers: Analog, Digital, Micro, Mini, Mainframe & Super Computers, Work Station, Server computers. Generations of Computers. Smart Systems: definition, characteristics and applications. Definition of Embedded system, GIS, GPS, Cloud Computing. Uses of computers in e-governance and various public domains and services.	8
II	Block diagram of computer and its functional units. Concept of hardware, software and firmware. Types of software. **Input devices** - keyboard, scanner, mouse, light pen, bar code reader, OMR, OCR, MICR, track ball, joystick, touch screen camera, mic etc. **Output devices**: monitors – classification of monitors based on technology -CRT & flat panel, LCD, LED monitors, speakers, printers – dot matrix printer, ink jet printer, laser printer, 3D Printers, Wi-Fi enabled printers, plotters and their types , LCD/LED projectors.	10

	Computer memory and its types, Storage devices: Magnetic tapes, Floppy Disks, Hard Disks, Compact Disc – CD-ROM, CD-RW, VCD, DVD, DVD-RW, usb drives, Blue Ray Disc, SD/MMC Memory cards.	
III	**Fundamentals of Digital Electronics**: Data Types, Complements, Fixed-Point Representation, Floating-Point Representation, Binary and other Codes, Error Detection Codes. **Logic Gates**, Boolean Algebra, Map Simplification, Combinational Circuits, Sequential Circuits, simple combinational circuit design problems. **Combinational Circuits**- Adder- Subtractor, Multiplexer, Demultiplexer, Decoders, Encoders **Sequential Circuits** - Flip - Flops, Registers, Counters.	10
IV	**Basic Computer Organization**: Instruction codes, Computer Registers, Computer Instructions, Timing & Control, Instruction Cycles, Memory Reference Instruction, Input - Output & Interrupts Instruction formats, Addressing modes, Instruction codes, Machine language, Assembly language. **Register Transfer and Micro operations**: Register Transfer Language, Register Transfer, Bus & Memory Transfer, Arithmetic Micro-operations, Logic Micro-operations, Shift Micro-operations.	10
V	**Processor and Control Unit**: Hardwired vs. Micro programmed Control Unit, General Register Organization, Stack Organization, Instruction Format, Data Transfer & Manipulation, Program Control, Introductory concept of RISC, CISC, advantages and disadvantages of both. Pipelining – concept of pipelining, introduction to Pipelined data path and control – Handling Data hazards & Control hazards.	10
VI	**Memory and I/O Systems** - Peripheral Devices, I/O Interface, **Data Transfer Schemes** - Program Control, Interrupt, DMA Transfer. I/O Processor. **Memory Hierarchy**, Processor vs. Memory Speed, High-Speed Memories, Main memory & its types, Auxiliary memory, Cache Memory, Associative Memory, Interleaving, concept of Virtual Memory, Hardware support for Memory Management.	10
VII	**Indian contribution to the field** – Contributions of reputed scientists of Indian origin - like - Dr. Vinod Dham – Father of Intel Pentium Processor, Dr. Ajay Bhat – Co-Inventor of USB Technology, Dr. Vinod Khosla- co-founder of Sun Microsystems, Dr. Vijay P Bhatkar - architect of India's national initiative in supercomputing, and many others. **Parallel Computing projects of India** – PARAM, ANUPAM, FLOSOLVER, CHIPPS etc. Other relevant contributors and contributions.	2
PART C: Learning Resources		
Textbooks, Reference Books, Other Resources		
Suggested Readings		
Textbooks:		

1. M.Morris Mano, "Computer System Architecture", PHI.
2. Heuring Jordan , "Computer System Design & Architecture" (A.W.L.)
3. मध्य प्रदेश हिंदी ग्रंथ अकादमी से प्रकाशित विषय से संबंधित पुस्तकें।

Reference Books:

4. William Stalling, "Computer Organization & Architecture", Pearson Education Asia.
5. V. Carl Hamacher , "Computer Organization", TMH
6. Tannenbaum, "Structured Computer Organization", PHI.
7. Er. Rajiv Chopra, "Computer Architecture", Revised 3rd Edition, S. Chand & Company Pvt. Ltd

Suggestive digital platform web links

https://www.youtube.com/watch?v=4TzMyXmzL8M
https://nptel.ac.in/courses/106/106/106106166/
https://nptel.ac.in/courses/106/106/106106134/

Suggested equivalent online courses

https://nptel.ac.in/courses/106/105/106105163/

PART D: Assessment and Evaluation

Internal Assessment : Continuous Comprehensive Evaluation (CCE) : **25 Marks** Shall be based on allotted assignments and Class Tests. The marks shall be as follows:		**External Assessment:** University Exam (UE) : **75 Marks** Time : **02.00 Hours**	
Assessment and presentation of assignment	4 Marks	Section (A): Three Very Short Questions (50 Words Each) OR Nine MCQ Questions	03 x 03 = 09 Marks OR 09 x 01 = 09 Marks
Class Test I (**Objective Questions**)	5 Marks		
Class Test II (**Descriptive Questions**)	8 Marks	Section (B) : Four Short Questions (200 Words Each)	04 x 09 = 36 Marks
Class Test III (**Based on solving circuit design problems**)	8 Marks	Section (C): Two Long Questions (500 Words Each)	02 x 15 = 30 Marks
Total	**25 Marks**	Total	**75 Marks**

Any remarks/suggestions:

PART A: Introduction				
Program: **Certificate**		Class: **B.C.A**	Year: **I Year**	Session: **2021-22**
1.	Course Code	S1-BCAA1P		
2.	Course Title	**Computer Fundamentals and Digital Lab**		
3.	Course Type (Core Course/Elective/Generic Elective/ Vocational	**Major – Paper I**		
4.	Pre-Requisite (if any)	Open for All		
5.	Course Learning Outcomes(CLO)	**After the completion of this course, a successful student will be able to do the following:** • Familiarity with parts of the computer and peripheral devices used with the computer. • Realization of the basic logic and universal gates. • Verify the behavior of logic gates using truth tables. • Implement Binary-to -Gray, Gray-to -Binary code conversions. • Design half and full adder circuit using basic gates. • Design and construct flip flops and verify the excitation tables.		
6.	Credit Value	**Practical - 2 Credits**		
7.	Total Marks	Max.Marks: **25+75**	Min. Passing Marks: **33**	

PART B: Content of the Course		
No. of Lab. Practicals (in hours per week): **1 Hrs. per week**		
Total No. of Labs: **30 Hrs.**		
	Suggestive list of Practicals	**No. of Labs.**
	I. Computer Fundamentals a) Identify various parts of the computer by physical examination. b) Identify various parts inside the CPU like motherboard, SMPS, ports, buses, IC chips, Processor, HDD, RAM etc. c) Identify various I/O devices available in the lab physically. II. Digital Electronics a) Verification and interpretation of truth table for AND, OR, NOT gates b) Verification and interpretation of truth table for NAND, NOR gates c) Verification and interpretation of truth table for Ex-OR, Ex-NOR gates d) Study of half adder using XOR and NAND gates and verification of its operation e) Study of full adder using XOR and NAND gates and verification of its operation	30 Hrs.

	f) Study of half subtractor and verification of its operation g) Study of full subtractor and verification of its operation h) Realization of logic functions with the help of NAND -Universal Gates i) Realization of logic functions with the help of NOR -Universal Gates j) Verify the truth table of RSflip-flops using NAND and NOR gates k) Verify the truth table of JKflip-flops using NAND and NOR gates l) Verify the truth table of T and D flip-flops using NAND and NOR gates m) Implementation of 4x1 multiplexer using logic gates n) Implementation of 1x4 demultiplexer using logic gates o) Verify Gray to Binary conversion using NAND gates only p) Verify Gray to Binary conversion using NAND gates only	

PART C: Learning Resources

Textbooks, Reference Books, Other Resources

Suggested Readings

Textbooks:

- M.Morris Mano, "Computer System Architecture", PHI.
- Heuring Jordan , "Computer System Design & Architecture" (A.W.L.)
- मध्यप्रदेश हिंदी ग्रंथ अकादमी से प्रकाशित विषय से संबंधित पुस्तकें।

Reference Books:

- William Stalling, "Computer Organization & Architecture", Pearson Education Asia.
- V. Carl Hamacher , "Computer Organization", TMH
- Tannenbaum, "Structured Computer Organization", PHI.

Suggestive digital platform web links

https://de-iitr.vlabs.ac.in/

Suggested equivalent online courses

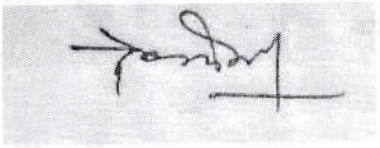
https://nptel.ac.in/courses/106/105/106105163/

PART D: Assessment and Evaluation

Internal Assessment : Continuous Comprehensive Evaluation (CCE) : **25 Marks**	**External Assessment**: University Exam (UE): **75 Marks** Time : **02.00 Hours**

Internal Assessment	**Marks**	**External Assessment**	**Marks**
Hands-on Lab Practice	5 Marks	Practical record file	10 Marks
Viva	5 Marks	Viva voce practical	15 Marks
Lab Test from practical list	7 Marks	Table works/ Exercise Assigned (02) in practical exam	40 Marks

Assignments (Charts/ Model)/ Technology Dissemination/ Excursion/ Lab visit/ Industrial Training	8 Marks	Reports of excursion/ Lab visits/ Industrial training/ Survey/ Collection/ Models	10 Marks
Total ***Excursion/ Lab visits/ Industrial*** ***Training is compulsory***	**25 Marks**	**Total**	**75 Marks**



PART A: Introduction			
Program: **Certificate**	Class: **B.C.A.**	Year: **I Year**	Session: **2021-22**

1.	Course Code	S1 - BCAA2T
2.	Course Title	**Programming Methodology & Data Structures**
3.	Course Type (Core Course/Elective/Generic Elective/ Vocational	**Major – Paper II**
4.	Pre-Requisite (if any)	To study this course, a student must have basic knowledge of Computers.
5.	Course Learning Outcomes(CLO)	**After the completion of this course, a successful student will be able to do the following:** • Develop simple algorithms and flow charts to solve a problem with programming using top down design principles. • Writing efficient and well-structured computer algorithms/programs. • Learn to formulate iterative solutions and array processing algorithms for problems. • Use recursive techniques, pointers and searching methods in programming. • Will be familiar with fundamental data structures, their implementation; become accustomed to the description of algorithms in both functional and procedural styles. • Have knowledge of complexity of basic operations like insert, delete, search on these data structures. • Possess ability to choose a data structure to suitably model any data used in computer applications. • Assess efficiency tradeoffs among different data structure implementations. • Implement and know the applications of algorithms for searching and sorting. • Know the contributions of Indians in the field of programming and data structures.
6.	Credit Value	**Theory – 4 Credits Practical – 2 Credits**
7.	Total Marks	Max. Marks : **25+75** | Min. Passing Marks: **33**

PART B: Content of the Course
No. of Lectures (in hours per week): **2 Hrs. per week**
Total No. of Lectures: **60 Hrs.**

Module	Topics	No. of Lectures
I	**Introduction to Programming** - Program Concept, Characteristics of Programming, Stages in Program Development, Algorithms, Notations, Design, Flowcharts, Types of Programming Methodologies.	8

	Basics of C++: A Brief History of C++, Application of C++, Compiling & Linking, Tokens, Keywords, Identifiers & Constants , Basic Data Types, User-Defined Data Types, Symbolic Constant, Type Compatibility, Reference Variables, Operator in C++, Scope Resolution Operator, Member Dereferencing Operators, Memory Management Operators, Manipulators, Type Cast Operator. **Functions In C++:** The Main Function, Function Prototyping, Call by Reference Call by Address, Call by Value, Return by Reference, Inline Function, Default Arguments, Constant Arguments, Function Overloading, Function with Array.	
II	**Classes & Objects:** A Sample C++ Program with class, Defining Member Functions, Making an Outside Function Inline, Nesting of Member Functions, Private Member Functions, Arrays within a Class, Memory Allocation for Objects, Static Data Members, Static Member, Functions, Array of Objects, Object as Function Arguments, Friend Functions, Virtual functions, Returning Objects, Constant member functions, Pointer to Members, Local Classes. **Constructor & Destructor:** Constructor, Parameterized Constructor, Multiple Constructors in a Class, Constructors with Default Arguments, Dynamic Initialization of Objects, Copy Constructor, Dynamic Constructor and Destructor.	10
III	**Inheritance:** Defining Derived Classes, Single Inheritance, Making a Private Member Inheritable, Multilevel Inheritance, Hierarchical Inheritance, Multiple Inheritance, Hybrid Inheritance, Virtual Base Classes, Abstract Classes, Constructor in Derived Classes, Nesting of Classes. Operator Overloading & Type Conversion, Polymorphism, Pointers, Pointers with Arrays C++, Streams, C++ Stream Classes, Unformatted I/O Operation, Formatted I/O Operation, Managing Output with Manipulators, Exception Handling.	8
IV	**Data Structure:** Basic concepts, Linear and Non-Linear data structures **Algorithm Specification:** Introduction, Recursive algorithms, Data Abstraction, Performance analysis. **Arrays:** Representation of single, two-dimensional arrays, triangular arrays, sparse matrices-array and linked representations. **Stacks:** Operations, Array and Linked Implementations, Applications-Infix to Postfix Conversion, Infix to Prefix Conversion, Postfix Expression Evaluation, Recursion Implementation. **Queues:** Definition, Operations, Array and Linked Implementations. Circular Queue-Insertion and Deletion Operations, Dequeue (Double Ended Queue), Priority Queue- Implementation.	12
V	**Linked Lists:** Singly Linked Lists, Operations, Concatenating, circularly linked lists-Operations for Circularly linked lists, Doubly Linked Lists- Operations, Doubly Circular Linked List, Header Linked List **Trees:** Representation of Trees, Binary tree, Properties of Binary Trees, Binary Tree Representations- Array and Linked Representations,	10

	Binary Tree Traversals, Threaded Binary Trees. **Heap:** Definition, Insertion, Deletion.	
VI	**Graphs:** Graph ADT, Graph Representations, Graph Traversals, Searching. **Hashing:** Introduction, Hash tables, Hash functions, Overflow Handling. **Sorting:** Bubble Sort, Selection Sort, Insertion Sort, Quick Sort, Merge Sort, Comparison of Sorting Methods, **Search Trees:** Binary Search Trees, AVL Trees- Definition and Examples.	10
VII	**Indian Contribution to the field:** Innovations in India, origin of Julia Programming Language, Indian Engineers who designed new programming languages, open source languages, Dr. Sartaj Sahni – computer scientist - pioneer of data structures, Other relevant contributors and contributions.	2

PART C: Learning Resources

Textbooks, Reference Books, Other Resources

Suggested Readings

Textbooks:

- J. R. Hanly and E. B. Koffman, "Problem Solving and Program Design in C", Pearson, 2015
- E. Balguruswamy, "C++ ", TMH Publication ISBN O-07-462038-X
- Herbert Shildt, "C++ The Complete Reference "TMH Publication ISBN 0-07-463880-7
- मध्य प्रदेश हिंदी ग्रंथ अकादमी से प्रकाशित विषय से संबंधित पुस्तकें।

Reference Books:

- R. Lafore, 'Object Oriented Programming C++"
- N. Dale and C. Weems, "Programming and problem solving with C++: brief edition", Jones & Bartlett Learning.
- Adam Drozdek, "Data Structures and algorithm in C++", Third Edition, Cengage Learning.
- Sartaj Sahani, "Data Structures, Algorithms and Applications with C++", McGraw Hill.
- Robert L. Kruse, "Data Structures and Program Design in C++", Pearson.
- D.S. Malik, "Data Structure using C++", Second edition, Cengage Learning.
- M. A. Weiss, "Data structures and Algorithm Analysis in C", 2nd edition, Pearson.
- Lipschutz, "Schaum's outline series Data structures", Tata McGraw-Hill

Suggestive digital platform web links

https://www.youtube.com/watch?v=BClS40yzssA
https://www.youtube.com/watch?v=vLnPwxZdW4Y&vl=en
https://www.youtube.com/watch?v=Umm1ZQ5ltZw

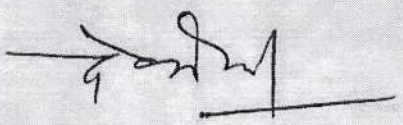
Suggested equivalent online courses

S.No.	Online Course	Duration	Platform
1	Programming in C++ https://nptel.ac.in/courses/106/105/106105151/	8 weeks	NPTEL
2	Beginning C++ Programming - From Beginner to Beyond https://www.udemy.com/course/beginning-c-plus-plus-programming/	Self paced	Udemy

PART D: Assessment and Evaluation

Internal Assessment : Continuous	**External Assessment**: University Exam (UE) : **75**

Comprehensive Evaluation (CCE) : **25 Marks** Shall be based on allotted assignments and Class Tests. The marks shall be as follows:		**Marks** Time : **02.00 Hours**	
Assessment and presentation of assignment	8 Marks	Section (A) : Three Very Short Questions (50 Words Each) OR Nine MCQ Questions	03 x 03 = 09 Marks
Class Test I (**Objective Questions**)	4 Marks		
Class Test II **(Descriptive Questions)**	5 Marks	Section (B) : Four Short Questions (200 Words Each)	04 x 09 = 36 Marks
Class Test III (**Based on solving programming problems**)	8 Marks	Section (C): Two Long Questions (500 Words Each)	02 x 15 = 30 Marks
Total	**25 Marks**	Total	**75 Marks**
Any remarks/suggestions: **Focus of the course/teaching should be on developing ability of the student in analyzing a problem, building the logic and efficient code for the problem.**			



PART A: Introduction				
Program: **Certificate**		Class: **B.C.A.**	Year: **I Year**	Session: **2021-22**
1.	Course Code	S1-BCAA2P		
2.	Course Title	**Programming Methodology & Data Structures Lab**		
3.	Course Type (Core Course/Elective/Generic Elective/ Vocational	**Major – Paper II**		
4.	Pre-Requisite (if any)	To study this course, a student must have basic knowledge of Computers.		
5.	Course Learning Outcomes(CLO)	**After the completion of this course, a successful student will be able to do the following:** 1. Develop simple algorithms and flow charts to solve a problem with programming using top down design principles. 2. Writing efficient and well-structured computer algorithms/programs. 3. Learn to formulate iterative solutions and array processing algorithms for problems. 4. Use recursive techniques, pointers and searching methods in programming. 5. Possess ability to choose a data structure to suitably model any data used in computer applications. 6. Implement and know the applications of algorithms for searching and sorting etc.		
6.	Credit Value	**Practical – 2 Credits**		
7.	Total Marks	Max. Marks : **25+75**	Min. Passing Marks: **33**	

PART B: Content of the Course		
No. of Lab Practicals (in hours per week): **1 hour per week**		
Total No. of Lab.: **30 Hrs.**		
	Suggestive list of Practicals	**No. of Labs.**
	Given the problem statement, students are required to formulate problem, develop flowchart/algorithm, write code in C++, execute and test it. Students should be given assignments on following : 1. Write a program to swap the contents of two variables. 2. Write a program for finding the roots of a Quadratic Equation. 3. Write a program to find area of a circle, rectangle, square using switch case. 4. Write a program to print table of any number. 5. Write a program to print Fibonacci series. 6. Write a program to find factorial of a given number using recursion. 7. Write a program to convert decimal (integer) number into	30

	equivalent binary number. 8. Write a program to check given string is palindrome or not. 9. Write a program to print digits of entered number in reverse order. 10. Write a program to print sum of two matrices. 11. Write a program to print multiplication of two matrices. 12. Write a program to generate even/odd series from 1 to 100. 13. Write a program whether a given number is prime or not. 14. Write a program for call by value and call by reference. 15. Write a program to create a pyramid structure 1 12 123 1234 16. Write a program to check entered number is Armstrong or not. 17. Write a program to input N numbers and find their average. 18. Write a program to find the area and volume of a rectangular box using constructor. 19. Write a program to design a class time with hours, minutes and seconds as data members. Use a data function to perform the addition of two time objects in hours, minutes and seconds. 20. Write a program to implement single inheritance. 21. Write a program to find largest element from an array. 22. Write a program to implement push and pop operations on a stack using array. 23. Write a program to perform insert and delete operations on a queue using array. 24. Write a program for Linear search. 25. Write a program for Binary search. 26. Write a program for Bubble sort. 27. Write a program for Selection sort. 28. Write a program for Quick sort. 29. Write a program for Insertion sort. 30. Write a program to implement linked list.	

PART C: Learning Resources

Textbooks, Reference Books, Other Resources

Suggested Readings

- J. R. Hanly and E. B. Koffman, "Problem Solving and Program Design in C", Pearson, 2015
- E. Balguruswamy, "C++ ", TMH Publication ISBN O-07-462038-X
- Herbert Shildt, "C++ The Complete Reference "TMH Publication ISBN 0-07-463880-7
- मध्य प्रदेश हिंदी ग्रंथ अकादमी से प्रकाशित विषय से संबंधित पुस्तकें।

Reference Books:

- R. Lafore, 'Object Oriented Programming C++"
- N. Dale and C. Weems, "Programming and problem solving with C++: brief edition", Jones & Bartlett

Learning.
- Adam Drozdek, "Data Structures and algorithm in C++", Third Edition, Cengage Learning.
- Sartaj Sahani, "Data Structures, Algorithms and Applications with C++", McGraw Hill.
- Robert L. Kruse, "Data Structures and Program Design in C++", Pearson.
- D.S. Malik, "Data Structure using C++", Second edition, Cengage Learning.
- M. A. Weiss, "Data structures and Algorithm Analysis in C", 2nd edition, Pearson.
- Lipschutz, "Schaum's outline series Data structures", Tata McGraw-Hill

Suggestive digital platform web links

https://www.youtube.com/watch?v=BClS40yzssA
https://www.youtube.com/watch?v=vLnPwxZdW4Y&vl=en
https://www.youtube.com/watch?v=Umm1ZQ5ltZw

Suggested equivalent online courses

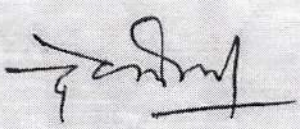
S.No.	Online Course	Duration	Platform
1	Programming in C++ https://nptel.ac.in/courses/106/105/106105151/	8 weeks	NPTEL
2	Beginning C++ Programming - From Beginner to Beyond https://www.udemy.com/course/beginning-c-plus-plus-programming/	Self paced	Udemy

PART D: Assessment and Evaluation

Internal Assessment : Continuous Comprehensive Evaluation (CCE) : **25 Marks**

External Assessment: University Exam (UE) : **75 Marks**
Time : **02.00 Hours**

Internal Assessment	**Marks**	**External Assessment**	**Marks**
Hands-on Lab Practice	5 Marks	Practical record file	10 Marks
Viva	5 Marks	Viva voce practical	15 Marks
Lab Test from practical list	7 Marks	Table works/ Exercise Assigned (02) in practical exam	40 Marks
Assignments (Charts/ Model)/ Technology Dissemination/ Excursion/ Lab visit/ Industrial Training	8 Marks	Reports of excursion/ Lab visits/ Industrial training/ Survey/ Collection/ Models	10 Marks
Total *Excursion/ Lab visits/ Industrial Training is compulsory*	**25 Marks**	**Total**	**75 Marks**



PART A: Introduction			
Program: **Certificate**	Class: **B.C.A.**	Year: **I Year**	Session: **2021-22**

1.	Course Code	S1 - BCAB2T	
2.	Course Title	**Operating System**	
3.	Course Type (Core Course/Elective/Generic Elective/ Vocational	**Minor**	
4.	Pre-Requisite (if any)	Open for all	
5.	Course Learning Outcomes (CLO)	• **After the completion of this course, a student shall be able to do the following**: • Describe the importance of computer system resources and the role of operating system in their management policies and algorithms. • Specify objectives of modern operating systems and describe how operating systems have evolved over time. • Understand various process management concepts and can compare various scheduling techniques, synchronization, and deadlocks. • Describe the concepts of memory management techniques. • Identify the best suited process management technique for any process. • Describe various file operations, file allocation methods and disk space management. • To understand and identify potential threats to operating systems and the security features to guard against them. • Learn to operate the Linux system,	
6.	Credit Value	**Theory - 4 Credits Practical – 2 Credits**	
7.	Total Marks	Max. Marks : **25+75**	Min. Passing Marks: **33**

PART B: Content of the Course		
No. of Lectures (in hours per week): **2 Hours per week**		
Total No. of Lectures: **60 Hrs.**		
Module	**Topics**	**No. of Lectures**
I	**Introduction to Operating System**: What is Operating System? History and Evolution of OS, Basic OS functions, Resource Abstraction, Types of Operating Systems– Batch Systems, Multiprogramming Systems, Multiprocessing Systems, Time Sharing Systems, Distributed OS, Real time systems. Operating System for Personal Computers, Workstations and Hand-held Devices. Applications of various operating system in real world. Some prevalent operating systems – Windows, UNIX/Linux, Android, MacOS, Blackberry OS, Symbian, Bada etc.	6
II	**Process Management**: Process Concepts, Process states & Process Control Block. **Process Scheduling**: Scheduling Criteria, Scheduling Algorithms (Preemptive & Non- Preemptive) – FCFS, SJF, SRTN, RR, Priority,	14

	Multiple-Processor, Real-Time, Multilevel Queue and Multilevel Feedback Queue Scheduling. **Deadlock** - Definition, Deadlock Characterization, Necessary and Sufficient Conditions for Deadlock. **Deadlock Handling Approaches**: Prevention, Avoidance, Detection and Recovery.	
III	**Memory Management**: Introduction, Address Binding, Logical versus Physical Address Space, Swapping, Contiguous & Non-Contiguous Allocation, Fragmentation (Internal & External), Compaction, Paging, Segmentation, Virtual Memory, Demand Paging, Performance of Demand Paging, Page Replacement Algorithms. **File Management**: Concept of File System(File Attributes, Operations, Types), Functions of File System, Types of File System, Access Methods (Sequential, Direct & other methods), Directory Structure (Single-Level, Two-Level, Tree-Structured, Acyclic-Graph, General Graph), Allocation Methods (Contiguous, Linked, Indexed)	14
IV	**Disk Management**: Structure, Disk Scheduling Algorithms (FCFS, SSTF, SCAN, C-SCAN, LOOK), Swap Space Management, Disk Reliability, Recovery. **Security**: Security Threats, Security policy mechanism, Protection, Trusted Systems, Authentication and Internal Access Authorization, Windows Security.	12
V	**LINUX**: Introduction, History and features of Linux, advantages, hardware requirements for installation, Linux architecture, file system of Linux - boot block, super block, inode table, data blocks. Linux standard directories, Linux kernel, Partitioning the hard drive for Linux, installing the Linux system, system - startup and shut-down process, init and run levels. Process, Swap, Partition, fdisk, checking disk free spaces. Difference between CLI OS & GUI OS, Windows v/s Linux, Importance of Linux Kernel, Files and Directories. Concept of Open Source Software.	12
VI	**Indian contribution to the field** – the BOSS operating system, open source softwares, growth of LINUX, Aryabhatt Linux, contributions of innovators – RajenSheth, Sunder Pichai etc.	2

PART C: Learning Resources

Textbooks, Reference Books, Other Resources

Suggested Readings

Textbooks:

- A Silberschatz, P.B. Galvin, G. Gagne, Operating Systems Concepts, 8th Edition, John Wiley Publications.
- A.S. Tanenbaum, Modern Operating Systems, 3rd Edition, Pearson Education.
- Operating System by Peterson
- Linux by Sumitabh Das
- मध्यप्रदेशहिंदीग्रंथअकादमीसेप्रकाशितविषयसेसंबंधितपुस्तकें।

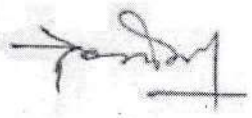
Reference Books:

- G. Nutt, Operating Systems: A Modern Perspective, 2nd Edition Pearson Education.
- W. Stallings, Operating Systems, Internals & Design Principles, 8th Edition, Pearson Education.
- M. Milenkovic, Operating Systems- Concepts and design, Tata McGraw Hill.
- Operating System design and Concepts by Milan Milenkovic.

Suggestive digital platform web links
https://web.iitd.ac.in/~minati/MTL458.html https://www.cse.iitb.ac.in/~mythili/os/ https://www.youtube.com/watch?v=aCJ3YgoolHQ
Suggested equivalent online courses
https://nptel.ac.in/courses/106/102/106102132/

PART D: Assessment and Evaluation

Internal Assessment : Continuous Comprehensive Evaluation (CCE) : **25 Marks** Shall be based on allotted assignments and Class Tests. The marks shall be as follows:		**External Assessment**: University Exam (UE) : **75 Marks** Time : **02.00 Hours**	
Assessment and presentation of assignment	4 Marks	Section (A) : Three Very Short Questions (50 Words Each) OR Nine MCQ Questions	03 x 03 = 09 Marks **OR** 09 x 01 = **9 Marks**
Class Test I (**Objective Questions**)	5 Marks		
Class Test II (**Descriptive Questions**)	8 Marks	Section (B) : Four Short Questions (200 Words Each)	04 x 09 = 36 Marks
Class Test III (**Based on OS commands**)	8 Marks	Section (C): Two Long Questions (500 Words Each)	02 x 15 = 30 Marks
Total	**25 Marks**	Total	**75 Marks**
Any remarks/suggestions:			



PART A: Introduction			
Program: **Certificate**	Class: **B.C.A.**	Year: **I Year**	Session: **2021-22**

1.	Course Code	S1- BCAB2P	
2.	Course Title	**Operating System Lab**	
3.	Course Type (Core Course/Elective/Generic Elective/ Vocational	**Minor**	
4.	Pre-Requisite (if any)	Open for All	
5.	Course Learning Outcomes (CLO)	**After the completion of this course, a student shall be able to:** • Operate the Linux system. • Do administration • Use Vi Editor	
6.	Credit Value	**Practical – 2 Credits**	
7.	Total Marks	Max. Marks : **25+75**	Min. Passing Marks: **33**

PART B: Content of the Course

No. of Lab. Practicals (in hours per week): **1Hr. per week**

Total No. of Lab.: **30 Hrs.**

	Suggestive List of Practicals	No. of Labs.
	Linux: **a) Linux Directory Commands:** pwd, mkdir, rm -rf, ls, cd,cd / , cd ~ **b) Linux File Commands:** touch, cat, cat >, cat >>, rm , cp, mv, rename **c) Linux Permission Commands:**su, id, useradd, passwd, groupadd, chmod, groupdel, chown, chgrp **d) Linux File Content & Filter Commands:** head, tail, tac, more, less, grep, cat, cut, grep, comm, sed, tee, tr, uniq, wc, od, sort, diff. **e) Linux Utility Commands:** find, bc, locate, date, cal, sleep, time, df, mount, exit, clear, gzip, gunzip. **f) Linux Networking Commands:** ip, ssh, mail, ping, host **g) Edit Crontab file:** to wall message on system on particular time automatically. h) **Vi editor:** Create file, edit, save and quit. Highligting the searched term within a file. cut, yank, undo.	30

PART C: Learning Resources

Textbooks, Reference Books, Other Resources

Suggested Readings

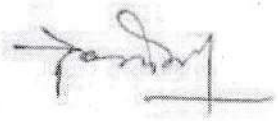
Textbooks:

- Linux by Sumitabh Das
- Linux Bible
- मध्यप्रदेश हिंदी ग्रंथ अकादमी से प्रकाशित विषय से संबंधित पुस्तकें।

Suggestive digital platform web links

https://web.iitd.ac.in/~minati/MTL458.html
https://www.cse.iitb.ac.in/~mythili/os/
https://www.youtube.com/watch?v=aCJ3YgoolHQ

Suggested equivalent online courses			
https://nptel.ac.in/courses/106/102/106102132/ https://www.youtube.com/watch?v=OHCMfsNpqCc			
PART D: Assessment and Evaluation			
Internal Assessment : Continuous Comprehensive Evaluation (CCE) : **25 Marks**		**External Assessment**: University Exam (UE) : **75 Marks** Time : **02.00 Hours**	
Internal Assessment	**Marks**	**External Assessment**	**Marks**
Hands-on Lab Practice	5 Marks	Practical record file	10 Marks
Viva	5 Marks	Viva voce practical	15 Marks
Lab Test from practical list	7 Marks	Table works/ Exercise Assigned (02) in practical exam	40 Marks
Assignments (Charts/ Model)/ Technology Dissemination/ Excursion/ Lab visit/ Industrial Training	8 Marks	Reports of excursion/ Lab visits/ Industrial training/ Survey/ Collection/ Models	10 Marks
Total ***Excursion/ Lab visits/ Industrial*** ***Training is compulsory***	**25 Marks**	**Total**	**75 Marks**



Part A Introduction				
Program: Certificate Course		**Class:**BCAI Year	**Year:** 2021	**Session:** 2021-2022
1	Course Code	S1-BCAC2G		
2	Course Title	Discrete Mathematics		
3	Course Type	Elective		
4	Pre-requisite (if any)	Open for All		
5	Course Learning Outcomes (CLO)	The course will enable the students: 1.Apply the Boolean algebra, switching circuits and their applications. 2. Minimize the Boolean Function using Karnaugh Map. 3. Understand the lattices and their types. 4. Graphs, their types and its applications in study of shortest path algorithms. 5. Test whether two given graphs are isomorphic. 6. Understand the Eulerian and Hamiltonian graphs. 7. Represent graphs using adjacency and incidence matrices. 8. Understand the discrete numeric functions, generating functions and Recurrence Relations.		
6	Credit Value	**Theory:**6Credit		
7	Total Marks	Max. Marks: 25 + 75	Min. Passing Marks: 33	

Part B - Content of the Course		
Total No. of Lectures (in hours per week): 3 hours per week **Total Lectures:** 90 hours		
Unit	Topics	No. of Lectures
I	**Relations:** Binary, Inverse, Composite and Equivalence relation, Equivalence classes and its properties, Partition of a set, Partial order relation, Partially ordered and Totally ordered sets, Hasse diagram. **Lattices:** Definition and examples, Dual, bounded, distributive and complemented lattices.	18
II	**Boolean Algebra:**Definition and properties, Switching circuits and its applications, Logic gates and circuits. **Boolean functions:** Disjunctive and conjunctive normal forms, Bool's expansion theorem, Minimize the Boolean function using Karnaugh Map.	18
III	**Graphs:**Definition and types of graphs, Subgraphs, Walk, path and circuit, Connected and disconnected graphs, Euler graph, Hamiltonian path and circuit, Dijkstra's Algorithm for shortest paths in weighted graph.	18

IV	**Trees:** Definition and its properties, Rooted, Binary and Spanning tree Rank and nullity of agraph, Kruskal's and Prim's Algorithm, Cut-set and its properties, Fundamental Circuit and Cut-Set, Planar graphs. **Matrix representation of graphs:** Incidence, Adjacency, Circuit, Cut-Set, Path.	18
V	**Discrete numeric and generating functions:** Operations on numeric functions, Asymptotic behavior of numeric functions, Generating functions. **Recurrence relations and recursive algorithms:**Recurrence relations, Linear recurrence relations with constant coefficients, Homogeneous solutions, Particular solutions, Total solutions, Solution by the method of generating functions.	18

Keywords/Tags:
Relation, Hasse diagram, Lattices, Boolean Algebra, Boolean function, Graph and Subgraph, Path and circuit, Tree, Spanning tree, Cut-set, Matrix representation of graph, Discrete numeric function, Generating function, Recurrence relation, Recursive algorithm.

Part C - Learning Resources

Text Books, Reference Books, Other Resources

Suggested Readings:

Text Books:

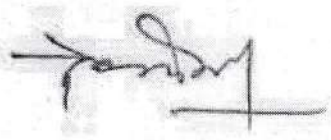
1. J. P. Tremblay and R. Manohar, Discrete Mathematical Structures With Applications To Computer Science, McGraw Hill Education, 1st edition, 2017.
2. C. L. Liu: Elements of Discrete Mathematics, McGraw Hill Education, 4th edition, 2017.
3. Narsingh Deo: Graph Theory with Applications to Engineering and Computer Science, Prentice Hall India Learning Private Limited, 1979.
4. मध्य प्रदेश हिन्दी ग्रंथ अकादमी से प्रकाशित विषय से संबंधित पुस्तकें।

Reference Books:

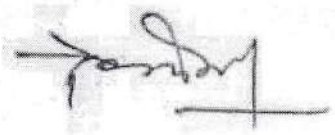
1. Seymour Lipschutz and Mark Lipson: Discrete Mathematics (Schaums Outline), McGraw Hill Education, 3rd edition, 2017.
2. Edgar G. Goodaire and Michael M. Parmenter, Discrete Mathematics with Graph Theory, Pearson Education Pt.Ltd., Indian Reprint 2003.

Suggested Digital Platforms Web links:
https://www.highereducation.mp.gov.in/?page=xhzIQmpZwkylQo2b%2Fy5G7w%3D%3D

Suggested Equivalent online courses:
https://nptel.ac.in/courses/111106086/
https://ugcmoocs.inflibnet.ac.in/index.php/courses/view_ug/311



Part D: Assessment and Evaluation		
Suggested Continuous Evaluation Methods: Maximum Marks: **100** Continuous Comprehensive Evaluation (CCE): **25**Marks University Exam (UE): **75**Marks		
Internal Assessment: Continuous Comprehensive Evaluation (CCE)	Class Test Assignment/Presentation	15 10 **Total Marks: 25**
External Assessment: University Exam (UE) Time: 02.00 Hours	Section (A): Three Very Short Questions (50 Words Each) Section (B): Four Short Questions (200 Words Each) Section (C): Two Long Questions (500 Words Each)	03 × 03 = 09 04 × 09 = 36 02 × 15 = 30 **Total Marks: 75**



भाग ए परिचय		
कार्यक्रम: प्रमाण पत्र	वर्ष: प्रथम वर्ष	सत्र : 2021 - 22

पाठ्यक्रम क्रमांक	V1-COM-DIGT
पाठ्यक्रम शीर्ष	डिजिटल मार्केटिंग
पाठ्यक्रम का प्रकार	व्यवसायिक
पूर्व आवश्यकता	सभी संकाय के विद्यार्थियों के लिए उपलब्ध
पाठ्यक्रम सीखने के परिणाम (सीएलओ)	**पाठ्यक्रम के सफल समापन के बाद, छात्र निम्नलिखित में सक्षम होगा:** • डिजिटल मार्केटिंग , उसका महत्व, वेब साइट का अर्थ और वेब साइट के स्तर, ब्लॉग, पोर्टल और वेबसाइट के बीच अंतर. • पेज ऑप्टिमाइजेशन, ऑफ पेज ऑप्टिमाइजेशन पर SEO (सर्च इंजन ऑप्टिमाइजेशन) की कार्यप्रणाली की समझ और रिपोर्ट तैयार करना • फेसबुक, ट्विटर, लिंक्डइन, टम्बलर, पिंटरेस्ट और अन्य सोशल मीडिया सेवाओं के अनुकूलन जैसे एसएमओ (सोशल मीडिया ऑप्टिमाइजेशन) के बारे में ज्ञान • भुगतान किए गए टूल जैसे Google विज्ञापन शब्द, प्रदर्शन विज्ञापन तकनीक • वेबसाइट ट्रैफ़िक, कीवर्ड विश्लेषण और ईमेल मार्केटिंग और विज्ञापन डिज़ाइनिंग सीखने के लिए SEO के लिए उपयोगी टूल पर व्यावहारिक अनुभव।
अपेक्षित नौकरी की भूमिका कैरियर के अवसर	• डिजिटल मार्केटिंग मैनेजर • खोज इंजन अनुकूलक • सोशल मीडिया मार्केटर • सामग्री विपणक • एआर-वीआर के लिए सामग्री निर्माता • आवाज सहायता के लिए एसईओ विशेषज्ञ
क्रेडिट मूल्य	4

भाग बी पाठ्यक्रम की सामग्री		
व्याख्यानों की कुल संख्या व्यावहारिक प्रति सप्ताह घंटों में: एल 1 घंटे / पी - 1 प्रायोगिक घंटा		
व्याख्यान प्रैक्टिकल की कुल संख्या: एल 30 घंटे पी 30 घंटे		
Module	Topics	No. of Hours
I	**डिजिटल मार्केटिंग का परिचय:** डिजिटल मार्केटिंग का अर्थ, पारंपरिक मार्केटिंग से अंतर, डिजिटल मार्केटिंग बनाम पारंपरिक मार्केटिंग पर निवेश की वापसी, ई कॉमर्स, सफल मार्केटिंग के लिए उपयोग किए जाने वाले उपकरण, डिजिटल मार्केटिंग के लिए व्यवसाय का SWOT विश्लेषण, ब्लॉग का अर्थ, वेबसाइट, पोर्टल और उनके अंतर, दृश्यता , आगंतुक जुड़ाव, रूपांतरण प्रक्रिया, अवधारण, प्रदर्शन मूल्यांकन। कीवर्ड: शीर्षक, मेटाटैग	10
II	**खोज इंजन अनुकूलन (एसईओ):** ऑन पेज ऑप्टिमाइज़ेशन तकनीक, ऑफ पेज ऑप्टिमाइज़ेशन तकनीक, रिपोर्ट तैयार करना, खोज अभियान बनाना, प्रदर्शन अभियान बनाना। **सोशल मीडिया ऑप्टिमाइज़ेशन (एसएमओ) :** सोशल मीडिया मार्केटिंग, एडवांस्ड फेसबुक मार्केटिंग, वर्ड प्रेस ब्लॉग क्रिएशन, ट्विटर मार्केटिंग, लिंक्डइन मार्केटिंग, इंस्टाग्राम मार्केटिंग, सोशल मीडिया एनालिटिकल टूल्स का परिचय। **कीवर्ड:** गूगल, वर्ड प्रेस, एफबी, लिंक्डइन, इंस्टाग्राम, एनालिटिक्स, एसएमओ, वर्बल कम्युनिकेशन, नॉन-वर्बल कम्युनिकेशन, इंट्रा पर्सनल और इंटरपर्सनल कम्युनिकेशन।	10
III	**खोज इंजन विपणन :** खोज इंजन विपणन का अर्थ और उपयोग, प्रयुक्त उपकरण - प्रति क्लिक भुगतान, Google ऐडवर्ड्स, प्रदर्शन विज्ञापन तकनीक, रिपोर्ट निर्माण वेबसाइट यातायात विश्लेषण, संबद्ध विपणन और विज्ञापन डिजाइनिंग : Google विश्लेषिकी, ऑनलाइन प्रतिष्ठा प्रबंधन, ईमेल विपणन, संबद्ध विपणन, विज्ञापन शब्द एल्गोरिदम को समझना, विज्ञापन डिजाइनिंग। **कीवर्ड:** पीपीसी, गूगल विज्ञापन शब्द, रिपोर्ट, एसईएम, गूगल एनालिटिक्स, विज्ञापन डिजाइन, सोशल मीडिया, संबद्ध	10

	प्रायोगिक पाठ्यक्रम	
	• डिजाइन एसईओ हमारे कॉलेज के पेज रैंक में सुधार करने के लिए। • Google विश्लेषिकी का उपयोग करके अपनी वेबसाइट के ट्रैफ़िक की निगरानी करें। • सर्च इंजन सबमिशन का उपयोग करने से वेबसाइटों की ऑनलाइन पहचान और दृश्यता में सुधार होता है। • ब्लॉग डिजाइन करना। • क्रॉस लिंकिंग का उपयोग। • वेबसाइट का ऑन/ऑफ ऑप्टिमाइजेशन। • वेबसाइट का बैक लिंक और आउटबाउंड लिंक डिज़ाइन करें। • वेब विकास, ऑडियो वीडियो उत्पादन, • डिजिटल सामग्री निर्माण, उत्पाद और बिक्री समीक्षा विश्लेषण	30

भाग स-अनुशंसित अध्ययन संसाधन

पाठ्य पुस्तकें, संदर्भ पुस्तकें, अन्य संसाधन

अनुशंसित सहायक पुस्तकें /ग्रन्थ/अन्य पाठ्य संसाधन/पाठ्य सामग्री:

Textbooks :

1. Ahuja Vandana (2016) Digital Marketing. Oxford University PressISBN: 9780199455447,
2. SainyRomi, NargundkarRajendra (2018) Digital Marketing: Cases from India, Notion Press ISBN 9781644291931, 1644291932
3. Digital Marketing 2.0- Dr.Rushen Chahal –Himalya pub.Nagpur

अनुशंसित डिजिटल प्लेटफॉर्म वेब लिंक

https://www.wordstream.com/linkbuilding#:~:text=Building%20links%20is%20one%20of,build%20links%20to%20your%20site.
https://www.targetinternet.com/the-top-32-most-useful-digital-marketing-links/
https://digitalmarketingphilippines.com/8-strategic-steps-to-natural-link-building/ **https://www.the-web-guys.com/digital-marketing/**

अनुशंसित समकक्ष ऑनलाइन पाठ्यक्रम :-

https://onlinecourses.swayam2.ac.in

(Dr. PAVAN MISHRA)

(PROF.PAVAN MISHRA)
Chairman
Central Board of Studies(Commerce)

Part A Introduction		
Program: Certificate	**Year: First Year**	**Session: 2021-2022**
Course Code	**V1-COM-DIGT**	
Course Title	**DIGITAL MARKETING**	
Course Type	**Vocational**	
Pre-requisite (if any)	Open for All	
Course Learning outcomes (CLO)	**After the successful completion of the course, the student shall be able to-:** • Understand digital marketing, importance thereof, meaning of web site and levels of web site, difference between blog, portal & website. • Understand the working of SEO (search engine optimization) on page optimization, off page optimization, and will learn to prepare reports • Learn about SMO (social media optimization) like Face book, twitter, LinkedIn, Tumblr, Pinterest and other social media services optimization • Understand paid tools like Google ad words, display advertising techniques • Learn and apply hands on experience on tools useful to SEO for analysis on website traffic, keyword analysis and learn email marketing and ad designing.	
Expected Job Role / career opportunities	• Digital Marketing Manager • Search Engine Optimizer • Social Media Marketer • Content Marketer • Content creator for AR-VR (Augmented Reality –Virtual Reality) • SEO Specialist for voice assistance	
Credit Value	**4**	

Part B- Content of the Course		
Total No. of Lectures + Practical (in hours per week): **L-1Hr / P-1 Lab Hr**		
Total No. of Lectures/ Practical: **L-30hrs/P-30hrs**		
Module	**Topics**	**No. of Hours**
I	**Introduction to Digital Marketing:** Meaning of Digital Marketing, Differences from Traditional Marketing, Return of Investments on Digital Marketing vs. Traditional Marketing, E Commerce, Tools used for successful marketing, SWOT Analysis of Business for Digital Marketing, Meaning of Blogs, Websites, Portal and Their Differences, Visibility, Visitor Engagement, Conversion Process, Retention, Performance Evaluation. ***Keywords:*** *Titles, Meta Tags*	**10**
II	**Search Engine Optimization (SEO):** On page Optimization Techniques, Off Page Optimization Techniques, Preparing Reports, Creating Search Campaigns, Creating Display Campaigns. **Social Media Optimization (SMO):** Introduction to Social Media Marketing, Advanced Facebook Marketing, Word press Blog Creation, Twitter Marketing, LinkedIn Marketing, Instagram Marketing, social media Analytical Tools. ***Keywords:*** *Google, Word press, FB, LinkedIn, Instagram, Analytics, SMO,Verbal Communication, Non- Verbal Communication, Intra personal and Interpersonal communication.*	**10**
III	**Search Engine Marketing:** Meaning and Use of Search Engine Marketing, Tools used – Pay Per Click, Google Adwords, Display Advertising Techniques, Report Generation **Website Traffic Analysis, Affiliate Marketing and Ad Designing:** Google Analytics, Online Reputation Management, EMail Marketing, Affiliate Marketing, Understanding Ad Words Algorithm, Advertisement Designing. ***Keywords:*** *PPC, Google Ad words, Reports, SEM,Google Analytics, Ad Design, Social Media, Affiliate*	**10**

	Practical	
	• Design SEO To improve page rank of our college. • Monitor traffic of your website using google analytics. • Using search engine submission improves online recognition and visibility of websites. • Designing a blog. • Use of cross linking. • On /Off optimization of the website. • Design Back link and outbound link of website. • Web Development, Audio Video Production, • Digital Content Creation, Product & Sales review analysis	**30**

Part C-Learning Resources

Text Books, Reference Books, Other resources

Suggested Readings:

1. Textbooks:

1. Ahuja Vandana Digital Marketing. Oxford University Press (2016) ISBN: 9780199455447,
2. SainyRomi, NargundkarRajendra Digital Marketing: Cases from India, Notion Press (2018) ISBN 9781644291931, 1644291932

2. Suggestive digital platforms web links:

https://www.wordstream.com/linkbuilding#:~:text=Building%20links%20is%20one%20of,build%20links%20to%20your%20site.
https://www.targetinternet.com/the-top-32-most-useful-digital-marketing-links/https://digitalmarketingphilippines.com/8-strategic-steps-to-natural-link-building/https://www.the-web-guys.com/digital-marketing/

Suggested equivalent online courses:

https://onlinecourses.swayam2.ac.in

(Dr. PAVAN MISHRA)

(PROF.PAVAN MISHRA)
Chairman
Central Board of Studies (Commerce)

संशोधित

आधार पाठ्यक्रमः प्रथम प्रश्न पत्र – हिन्दी भाषा

(भाग–ए) परिचय

	कार्यक्रम : यूजी लेवल प्रमाण--पत्र	कक्षा : बी.ए. / बी.कॉम / बी.एसारी. / बी.एच.एसारी. / बी.सी.ए / बी.बी.ए (प्रथम वर्ष)	वर्ष 2021	सत्र 2021 2022
	विषय :–	आधार पाठ्यक्रम		
1	कोर्स कोडः	X1-FCEAIT		
2	कोर्स का शीर्षकः	भाषा और संस्कृति		
3	कोर्स का प्रकार	आधार पाठ्यक्रम		
4	कोर्स अपेक्षित	कक्षा 12वी उत्तीर्ण किसी भी विषय समूह से।		
5	कोर्स अधिगम उपलब्धि (लर्निंग आउटकम) (CLO)	1.उत्कृष्ट साहित्यिक पाठो के अध्ययन से रुचि का विकास करना। 2.सांस्कृतिक चेतना और राष्ट्रीय भावना का विकास करना। 3.भाषा–ज्ञान। 4.सामान्य शब्दावली और विशेष शब्दावली के अध्ययन द्वारा भाषा एवं संस्कृति बोध का विकास करना 5.विशिष्ट शब्दावली (बीज शब्द / की वर्ड) से परिचित करवाते हुए बोध के स्तर को विकसित करना। 6. प्रतियोगी परीक्षाओं हेतु तैयार करना।		
6	क्रेडिट मान	02 क्रेडिट		
7	कुल अंक	50 अंक		
8	उत्तीर्ण अंक	17 अंक		

9/2/22

(भाग – बी) कोर्स सामग्री

व्याख्यान की कुल संख्या : वर्ष में अधिकतम 15 घंटे

यूनिट	विषय	व्याख्यान की संख्या
इकाई– एक		
	1. मैथिलीशरण गुप्त: परिचय पाठ: मातृभूमि (कविता)	5 घण्टे
	2. प्रेमचन्द: परिचय पाठ: शतरंज के खिलाडी (कहानी)	
	3 व्यंग्य: शरद जोशी–जीप पर सवार इल्लियॉ	
इकाई– दो		
	1. वैचारिक–भारतीय भाषाओं में राम	5 घण्टे
	2. आचार्य रामचन्द्र शुक्ल: परिचय पाठ: उत्साह (भावमूलक निबन्ध)	
	3. रामधारी सिंह दिनकर: परिचय पाठ: भारत एक है (संस्कृति)	
	4.आदिशंकराचार्य–जीवन व दर्शन	
इकाई– तीन		
	1. पर्यायवाची शब्द; विलोम शब्द; अनेक शब्द के लिए एक शब्द (हिन्दी व्याकरण)	5 घण्टे
	2. संधि और उसके प्रकार (हिन्दी व्याकरण)	
	3. बीज शब्द– धर्म, अद्वैत, भाषा, अवधारणा, उदारीकरण।	
सार बिन्दु (की वर्ड)/ टैग सर्च करे:		
मैथिलीशरण गुप्त:	मैथिलीशरण गुप्त की कविता मातृभूमि	
प्रेमचंद	प्रेमचंद शतरंज के खिलाडी	
रामधारी सिंह दिनकर	भारत एक है रामधारी सिंह दिनकर	

Ghm c/

आचार्य रामचन्द्र शुक्ल	उत्साह निबन्ध रामचन्द्र शुक्ल
स्वामी विवेकानन्द	शिकागो व्याख्यान
धर्म क्या है	
अद्वैत	
भाषा विकास	
भाषा परिभाषा	
अवधारणा का अर्थ एव परिभाषा	
उदारीकरण की विशेषता	
पर्यायवाची शब्द	
विलोम शब्द	
अनेक शब्द के लिए एक शब्द	
संधि	

(भाग सी)

अनुशंसित अध्ययन संसाधन

पाठ्य पुस्तके, सन्दर्भ पुस्तकें, अन्य संसाधन

1	प्रेमचन्द– मानसरोवर, खण्ड:3
2	आचार्य रामचन्द्र शुक्ल– चिन्तामणि, भाग 1
3	डॉ. वासुदेव नन्दन प्रसादः आधुनिक हिन्दी व्याकरण और रचना, भारती भवन, ठाकुर बाडी रोड ,पटना, बिहार
4	डॉ. राजेश्वर चतुर्वेदी, हिन्दी व्याकरण– उपकार प्रकाशन, आगरा उ.प्र.
5	
6	हिन्दी ज्ञान कोश
7	इन्टर नेट सामग्री– टैग में उल्लेखित

(भाग डी)

निरंक

प्रोफेसर
(प्रो. प्रेमलता चुटेल
हिन्दी अध्ययनशाला
वि.वि.वि. उज्जैन (म.प्र.)

PART A: Introduction				
Program: UG Level		Class: I Year	Year: 2021-22	Session: 2021-22 onwards
Subject: **Foundation Course (English)**				
1.	Course Code	X1-FCHB1T		
2.	Course Title	English Language and Indian Culture		
3.	Course Type (Core Course/Elective/Generic Elective/ Vocational	**Foundation Course**		
4.	Pre-Requisite (if any)	To study this course, a student should have basic knowledge of English language. This course will be studied by all the students of UG level under the Foundation Course category.		
5.	Course Learning Outcomes (CLO)	Through this course the students will be able to: 1. Prepare for various competitive exams by developing their English language competence. 2. Promote their comprehension skills by being exposed to a variety of texts and their interpretations. 3. Build and enhance their vocabulary. 4. Develop their communication skills by strengthening grammar and usages. 5. Inculcate values which make them aware of national heritage and environmental issues, making them responsible citizens.		
6.	Credit Value	2 Credit		
7.	Total Marks	Max. Marks: 50	Min. Pass Marks:17	

PART B: Content of the Course		
Total No. of Lectures-Tutorials- Practical (in hours per week): L-T-P		
Total No. of Lectures:		
Unit	Topics	No. of Lectures
I	**Reading, Writing and Interpretation Skills:** 1. Where The Mind is Without Fear– Rabindranath Tagore **[Key Word: Patriotism]** 2. National Education – M. K. Gandhi **[Key Word: Edification]** 3. The Axe- R.K Narayan **[Key Word: Environment]** 4. The Wonder That Was India- A.L Basham (an excerpt) **[Key Word: Indianness]** 5. Preface to the Mahabharata C. Rajagopalachari **[Key Word: Indian Mythology]**	05
II	**Comprehension Skill:** Unseen Passage followed by Multiple choice questions	05
III	Basic Language Skills 1: Vocabulary Building: Suffix, Prefix, Synonyms, Antonyms, Homophones, Homonyms and One-word substitution. 2: Basic Grammar: Noun, Pronoun, Adjective, Verb, Adverb, Prepositions, Articles,	05

	Time and Tense	

PART C: Learning Resources

Textbooks, Reference Books, Other Resources

Suggested Readings

Essential English Grammar – Raymond Murphy, Cambridge University Press.

- Practical English Grammar Exercises 1- A. J. Thomson & A. V. Martinet, Oxford India.
- Practical English Usage - Michael Swan, Oxford
- English Grammar in Use – Raymond Murphy, Cambridge University Press.

Part D: Assessment and Evaluation			
Max Marks: 50	**Min Marks: 17**	**University Exam (UE)**	**Total: 50**
U.E. Time 2 Hours			

	External Assessment (UE)	Time: 2 Hours	
	Fifty Multiple Choice /Objective/True-False type questions to be asked. Each question carries one mark		

31.5.21

Dr. A.S. Kushwah
Chairman BOS Jiwaji University, Gwalior

31/05/21

प्राचार्य
शा.एस.एल.पी. स्नातकोत्तर महाविद्यालय
मुरार, ग्वालियर

Foundation Course: ENVIRONMENTAL EDUCATION

PART A: Introduction			
Program: UG Level Certificate	Class: UG I Year	Year: FIRST Year.	Session: 2021-22 onwards
Subject: Environmental Education			

1.	Course Code	X1-FCAC1T	
2.	Course Title	**Environmental Education**	
3.	Course Type (Core Course/Elective/Generic Elective/ Vocational	**Foundation Course**	
4.	Pre-Requisite (if any)	A course intended to create awareness about the life of human beings which is an integral part of environment; and to inculcate the skills required to protect the environment from all sides. To study this course, the student must have a knowledge about the environmental components, pollution, biodiversity, and ecosystem at senior secondary, class 12th level.	
5.	Course Learning Outcomes (CLO)	1. To understand various aspects of life forms, ecological processes, and the impacts on them by the human during Anthropocene era. 2. To build capabilities to identify relevant environmental issues, analyze the various underlying causes, evaluate the practices and policies, and develop framework to make inform decisions. 3. To develop empathy for all life forms, awareness, and responsibility towards environmental protection and nature preservation. 4. To develop the critical thinking for shaping strategies such as; scientific, social, economic, administrative & legal, environmental protection, conservation of biodiversity, environmental equity and sustainable development. 5. To prepare for the competitive exams.	
6.	Credit Value	2 Credit	
7.	Total Marks	Max.Marks : 50	Min. Passing Marks:17

(डा॰ अर्चना पंचोली)

PART B: Content of the Course		
Total No. of Lectures-15 Hrs. (01 hours per week):		
Total No. of Lectures: 15		
Unit	Topics	No. of Lectures
I	**Environment and Natural Resources:** • Multidisciplinary nature, Scope and Importance of Environment • Components of Environment: Atmosphere, Hydrosphere, Lithosphere, and Biosphere. • Brief account of Natural Resources and associated problems: Land Resource, Water Resource, Energy Resource • Concept of Sustainability and Sustainable Development ***Keywords: Environment, Forest, Mineral, Food, Land, Water, Energy, Sustainable Development***	5 Hrs.
II	**Biome, Ecosystem and Biodiversity:** • Major Biomes: Tropical, Temperate, Forest, Grassland, Desert, Tundra, Wetland, Estuarine and Marine • Ecosystem: Structure function and types their Preservation & Restoration • Biodiversity and its conservation practices. ***Keywords: Biome, Ecosystem, Biodiversity***	4 Hrs.
III	**Environmental Pollution, Management and Social Issues:** • Pollution: Types, Control measures, Management and associated problems. • Environmental Law and Legislation: Protection and conservation Acts. • International Agreement & Programme. • Environmental Movements, communication and public awareness programme. • National and International organizations related to environment conservation and monitoring. • Role of information technology in environment and human health. ***Keywords: Pollution, Environmental Legislation, Environmental Movement, Environmental programme and organization.***	6 Hrs.

Suggested activities: (at least one)

1. Visit to an area to document environmental assets: rivers / forest / flora / fauna.
2. Visit to a local polluted site Urban / Rural/ Industrial / Agricultural
3. Study of simple ecosystem.

(डा-अर्चना पंचोली)

PART C: Learning Resources

Textbooks, Reference Books, Other Resources

- Singh; J.S., Singh S.P. and Gupta, S.R.; "Ecology; Environment Science and Conservation ",S Chand publishing , New Delhi , (2018)
- Divan, S. and Rosencranz , A. , "Environmental Law and Policy in India :Cases, Material & Status" Oxford University Press , India , (2002) 2nd Edition .
- Odum , E.P. , "Fundamentals of Ecology " , Philadelphia Saundres , (1971)
- Bharucha , Erach , "Environmental studies " Universities Press India Pvt. Ltd. Hyderabad (2014) (Hindi Edition also available).
- Kaushik, Anubha , Kaushik , C.P. "Perspectives in Environmental Studies "New age International Publishers , (2018), 6th Edition .
- Asthana, D. K Asthana Meera, "A Textbook of Environmental Studies", S. Chand.Publishing, New Delhi, (2007)
- National Digital Library (https://ndl.iitkgp.ac.in/homestudy/science)
- Epg- pathshala (https://epgp.inflibnet.ac.in/Home/Download)
- NPTEL (https://nptel.ac.in/course.html)
- Coursera (https://www.coursera.org/search?query=environmental+science&page=1)
- इराक भरूचा, पर्यावरण अध्ययन, ओरियन्ट ब्लैकस्वान प्राइवेट लिमिटेड नई दिल्ली (2014)
- दयाशंकर त्रिपाठी, पर्यावरण अध्ययन] मोतीलाल बनारसीलाल पब्लिशर्स दिल्ली.(2005)
- रतन जोशी, पर्यावरण अध्ययन, साहित्य भवन पब्लिकेशन्स.(2018)

Suggested equivalent online course –

i. The Health Effects of Climate Change (edx)
ii. Climate Change: Financial Risks and Opportunities (edx)
iii. Introduction to Environmental Law and Policy (coursera)
iv. Women in environmental biology (coursera)
v. Our Earth: It's Climate, History, and Processes (coursera)
vi. Ecology, physiology, environmental science (national digital library)

(डा० अर्चना पंचोली)

भाग . अ परिचय

पाठ्यक्रमः स्नातक प्रमाण पत्र	कक्षाः स्नातक प्रथम वर्ष	वर्षः- FIRST Year	सत्रः- 2021-22
विषयः-पर्यावरण अध्ययन			
1) पाठ्यक्रम कोडः.			
2) पाठ्यक्रम शीर्षकः.	पर्यावरण अध्ययन	X1FCAC1T	
3) पाठ्यक्रम प्रकारः.	आधार पाठ्यक्रम		
4) पूर्वापेक्षा .	✓ सीनियर सैकेण्डरी कक्षा 12 वी तक विद्यार्थी को पर्यावरण के घटक, प्रदूषण, जैव विविधता, पारिस्थितिकी तंत्र का ज्ञान होना आवश्यक हैं। ✓ इस पाठ्यक्रम के माध्यम से अपेक्षा हैं कि विद्यार्थी पर्यावरण के प्रति जागरूकता को दृष्टिगत रखते हुए उसके विभिन्न घटको का प्रबंधन एवं सतत् विकास की आवश्यकता को ध्यान में रखकर मानव विकास हेतु क्रियाकलाप करे।		
5) पाठ्यक्रम अध्ययन की परिलब्धियां (C.L.O.)	✓ इस पाठ्यक्रम के माध्यम से आने वाले मानवजनित युग में विद्यार्थियों में विभिन्न जीवन प्रारूप पारिस्थितिकी प्रक्रियाओं व उन पर होने वाले मानवीय प्रभावों की व्यापक समझ का विकास करना हैं। ✓ विद्यार्थियों में ऐसी क्षमताओं का विकास करना हैं जिससे वह पर्यावरण संबंधित मुद्दों को पहचान कर अन्तर्निहित कारकों का विश्लेषण कर सके एवं उनसे संबंधित क्रियाकलाप व नीतियों का मूल्यांकन कर नीतिगत रूपरेखा विकसित करने में सहयोग कर सकेगा। ✓ पर्यावरण सुरक्षा व प्रकृति संरक्षण हेतु सभी जीवन प्रारूपों के लिए समानुभूति, जागरूकता एवं उत्तरदायित्वों का बोध कराना। ✓ पर्यावरण सुरक्षा, जैव विविधता संरक्षण, पर्यावरण समानता एवं सतत् विकास हेतु वैज्ञानिक, सामाजिक, आर्थिक, प्रशासनिक व वैधानिक नीतियों को स्वरूप प्रदान करने की महत्वपूर्ण सोच को विकसित करना हैं। ✓ विद्यार्थी को प्रतियोगी परीक्षा के लिए तैयार करना		
क्रेडिट	02 क्रेडिट		
कुल अंक	अधिकतम अंकः- 50, न्यूनतम प्राप्तांक - 17		

(डा॰ अर्चना पंचोली)

	भाग - ब पाठ्यक्रम की विषयवस्तु कुल व्याख्यान - 15 घंटे (1 घंटा प्रति सप्ताह)	
ईकाई	विषयः	कुल व्याख्यान
I	पर्यावरण एवं प्राकृतिक संसाधनः ✓ पर्यावरण की बहुशास्त्रीय प्रकृति, विषय क्षेत्र एवं महत्व ✓ पर्यावरण के घटक . वायुमण्डल, जल मण्डल, स्थल मण्डल व जैव मण्डल ✓ प्राकृतिक संसाधन एवं संबंधित समस्याएँ का संक्षिप्त विवरणः भूसंसाधन, जल संसाधन, ऊर्जा संसाधन ✓ दीर्घकालिक एवं सतत विकास की अवधारणा कुंजी शब्दः पर्यावरण, वन, खनिज, खाद्य, भू, जल, ऊर्जा एवं सतत् विकास	5
II	बायोम,पारिस्थितिकी तंत्र एवं जैव विविधताः ✓ मुख्य बायोमः उष्णकटिबंधीय, शीतोष्ण, वन, घास का मैदान, मरूस्थल, टुण्डरा, आर्द्रभूमि, मुहाना व समुद्री ✓ पारिस्थितिकी तंत्र की संरचना, कार्य एवं प्रकार व इनका संरक्षण तथा पुनः स्थापन ✓ जैव विविधता और उसका संरक्षण कुंजी शब्दः बायोम, पारिस्थितिकी तंत्र, जैव विविधता	5
III	पर्यावरण प्रदूषण, प्रबंधन एवं सामाजिक मुद्देः ✓ प्रदूषण के प्रकार, नियंत्रण के उपाय, प्रबंधन एवं उससे जुड़ी समस्याऐं ✓ पर्यावरण कानून एवं अधिनियमः पर्यावरण सुरक्षा एवं संरक्षण विधान अन्तर्राष्ट्रीय समझौता एवं कार्यक्रम. ✓ पर्यावरण आंदोलन, संचार एवं जनजागरूकता कार्यक्रम ✓ पर्यावरण संरक्षण एवं नियंत्रण से संबंधित राष्ट्रीय एवं अन्तर्राष्ट्रीय संगठन ✓ पर्यावरण और मानव स्वास्थ्य में सूचना प्रौद्योगिकी की भूमिका। कुंजी शब्दः प्रदूषण, पर्यावरण कानून एवं विधान, पर्यावरण आंदोलन, पर्यावरण कार्यक्रम एवं संगठन	5

(डा० अर्चना पँचोली)

Part-C

Learning Resource

Text Book, References Books, Other resources

- Singh; J.S., Singh S.P. and Gupta, S.R.; "Ecology; Environment Science and Conservation ",S Chand publishing , New Delhi , (2018)
- Divan, S. and Rosencranz , A. , "Environmental Law and Policy in India :Cases, Material & Status" Oxford University Press , India , (2002) 2nd Edition .
- Odum , E.P. , "Fundamentals of Ecology " , Philadelphia Saundres , (1971)
- Bharucha , Erach , "Environmental studies " Universities Press India Pvt. Ltd. Hyderabad (2014) (Hindi Edition also available).
- Kaushik, Anubha , Kaushik , C.P. "Perspectives in Environmental Studies "New age International Publishers , (2018), 6th Edition .
- Asthana, D. K Asthana Meera, "A Textbook of Environmental Studies", S. Chand Publishing, New Delhi, (2007)
- National Digital Library (https://ndl.iitkgp.ac.in/homestudy/science)
- Epg- pathshala (https://epgp.inflibnet.ac.in/Home/Download)
- NPTEL (https://nptel.ac.in/course.html)
- Coursera (https://www.coursera.org/search?query=environmental+science&page=1)
- इराक भरूचा, पर्यावरण अध्ययन, ओरियन्ट ब्लैकस्वान प्राइवेट लिमिटेड नई दिल्ली (2014)
- दयाशंकर त्रिपाठी, पर्यावरण अध्ययन] मोतीलाल बनारसीलाल पब्लिशर्स दिल्ली.(2005)
- रतन जोशी, पर्यावरण अध्ययन, साहित्य भवन पब्लिकेशन्स.(2018)

Suggested equivalent online course –

i. The Health Effects of Climate Change (edx)
ii. Climate Change: Financial Risks and Opportunities (edx)
iii. Introduction to Environmental Law and Policy (coursera)
iv. Women in environmental biology (coursera)
v. Our Earth: It's Climate, History, and Processes (coursera)
vi. Ecology, physiology, environmental science (national digital library)

(डा० अर्चना पँचोली)

Foundation Course: Yoga and Meditation

Part-A: Introduction				
Program: Certificate course		**Class**: B.A. 1 Year	**Year**: 2021	**Session**: 2021 – 2022
Subject: Yogic Science				
1.	**Course Code**	A1-YOSC1F		
2.	**Course Title**	**Yogaand Meditation (Paper-2)**		
3.	**Course Type**	Foundation Course		
4.	**Pre-requisite (If any)**	For BA I Year students, this course is compulsory for all.		
5.	**Course Learning Outcomes**	After studying this course,students will be able to: • Take care of their own Physical Mental emotional, social and spiritual health.		
6.	**Credit Value**	Theory-**2**		
7.	**Total Marks**	Max. Marks: 50	Min. Passing Marks: 17	

Part-B: Content of the Course

Total numbers of Lectures (in hours per week): 2 hours per week
Total Lectures: 30 hours; L – T – P: 2 – 0 – 0

Units	Topics	No. of Lectures
I	**Introduction to Yoga and Yogic Practices** 1. Yoga: Etymology, definitions, aim, objectives and misconceptions 2. Yoga: Its Origin, history and development 3. Rules and regulations to be followed by Yoga Practitioners 4. Introduction to Yoga practices 5. Shatkarma: meaning, purpose and their significance in Yoga Sadhana 6. Introduction to Yogic Loosening practices and Surya Namaskar **Key Words:** History and Development of Yoga, Shatkarma, Common Yogic Practices.	10
II	**Breathing Practices and Pranayama** 1. Sectional Breathing (Abdominal, Thoracic and Clavicular)	10

	2.Yogic Deep Breathing 3.Concept of Puraka, Rechaka and Kumbhaka 4. Concept of Bandha and Mudra 5. AnulmoaViloma/NadiShodhana 6. Shitali7. Bhramari **Key Words:**Sectional breathing, Deep breathing, Bandha & Mudra, Shitali, Bhramari.	
III	**Practices leading to Meditation** 1.Recitation of Pranava Mantra 2. Recitation of Hymns, in vocations and prayers 3. Anter Maun 4. Breath Meditation 5. Om Dhyana **Key Words:** Pranav Mantra, Antermaun, Breath Meditation, Om Dhyan.	10

Part-C: Learning Resources

Text Books, Reference Books, Other resources

Suggested Readings:

1. Singh S. P & Yogi Mukesh: Foundation of Yoga, Standard Publication, New Delhi, 2010.
2. Swami Dhirendra Brahmchari: YogasanaVijnana, Dhirendra Yoga Publication, New Delhi, 1966.
3. Saraswati, Swami Satyanand: Asana, Pranayama, Mudra, Bandha (APMB), Yoga Publication Trust, Munger, 2013.
4. H. R. Nagendra: Asana, Pranayama, Mudra, Bandha, Swami Vivekananda YogPrakashan, Bangalore, 2002.
5. Ishwar Bhardwaj: SaralYogasana, Satyam Publishing House, New Delhi, 2018.
6. Shri Rai Singh Chouhan: Mudra Rahasya, Bhartiya Yog Sansthan, New Delhi, 2014.
7. Dr. Vishwanath Prasad Sanha: Dhyan Yoga, Bhartiya Yog Sansthan, New Delhi, 1987.
8. Shri Deshraj: Dhyan Sadhana, Bhartiya Yoga Sansthan, New Delhi, 2015.

Suggestive digital platforms web links:

1. www.rishikeshnathyogshala.com

Suggested equivalent online courses:1.https://sahayji.com/hathayoga-course

2. https://theyogainstitute.org/

Part D: Assessment and Evaluation		
Maximum Marks: 50 University Examination (Objective) 50 Time: **01.00 Hour**		
External Assessment: University Examination	Objective questions	50
	Total	**50**
Any Remarks/suggestions:		

आधार पाठ्यक्रम :योग एवं ध्यान

भाग अ - परिचय				
प्रोग्राम: सर्टिफिकेट		कक्षा `: स्नातक प्रथम वर्ष	वर्ष::2021	सत्र:2021- 2022
विषय:योग विज्ञान				
1	पाठ्यक्रम का कोड	A1-YOSC1F		
2	पाठ्यक्रम का शीर्षक	योग एवं ध्यान (प्रश्न पत्र2)		
3	पाठ्यक्रम का प्रकार	आधार पाठ्यक्रम		
4	पूर्वापेक्षा(Prerequisite) (यदि कोई हो)	स्नातक प्रथम वर्षके छात्रों केलिए आधार पाठ्यक्रमअनिवार्य विषय है।		
5	पाठ्यक्रम अध्धयन की परिलब्धियां(कोर्स लर्निंगआउटकम) (CLO)	इस पाठ्यक्रम का अध्ययन करने के बाद, छात्र निम्न में सक्षम होंगे: • अपने स्वयं के शारीरिक मानसिक भावनात्मक, सामाजिक और आध्यात्मिक स्वास्थ्य के विकास में।		
6	क्रेडिटमान	2		
7	कुल अंक	अधिकतम अंक: 50	न्यूनतम उत्तीर्ण अंक: 17	

भाग ब- पाठ्यक्रम की विषयवस्तु		
व्याख्यान की कुल संख्या- (प्रति सप्ताह घंटे में):30 (दो घंटे प्रति सप्ताह) L-T-P: 2 – 0 – 0		
इकाई	विषय	व्याख्यान की संख्या
I	योग और योगिक अभ्यासों का परिचय 1. योग: व्युत्पत्ति, परिभाषाएं, उद्देश्य, उद्देश्य और गलत धारणाएं 2. योग: इसकी उत्पत्ति, इतिहास और विकास 3. योग अभ्यासकर्ताओं द्वारा पालन किए जाने वाले नियम और विनियम 4. योग प्रथाओं का परिचय	10

	5. षट्कर्म: योग साधना में अर्थ, उद्देश्य और उनका महत्व 6. योगिकशिथलीकरणऔर सूर्य नमस्कार का परिचय **सार बिंदु (कीवर्ड)**: योग का इतिहास और विकास, योग के सिद्धांत और महत्व, सामान्य योगिक अभ्यास।	
II	**श्वास अभ्यास और प्राणायाम** 1. अनुभागीय श्वास (पेट, थोरैसिक और क्लैविक्युलर) 2. योगिक गहरी श्वास 3. पुरक, रेचक और कुंभक की अवधारणा 4. बंध और मुद्रा की अवधारणा 5. अनुलोम विलोम/नाड़ी शोधन 6. शीतलीएवं7. भ्रामरी **सार बिंदु (कीवर्ड)**: पुरक, रेचक और कुंभक, बंध और मुद्रा, प्राणायाम	**10**
III	ध्यानअभ्यास 1. प्रणव मंत्र का पाठ 2. मंत्रों का पाठ, मंगलाचरण और प्रार्थनाओं में 3. अंतर मौन 4. श्वास ध्यान 5. ओम ध्यान **सार बिंदु (कीवर्ड)** :प्रणव मंत्र, श्वास ध्यान, ओम ध्यान	**10**
भाग स-अनुशंसित अध्ययन संसाधन		
पाठ्य पुस्तकें, संदर्भ पुस्तकें, अन्य संसाधन		
अनुशंसित सहायक पुस्तकें /ग्रन्थ/अन्य पाठ्य संसाधन/पाठ्य सामग्री:		

1. सिंह एस. पी. और योगी मुकेश: फाउंडेशन ऑफ योग, स्टैंडर्डपब्लिकेशन, नई दिल्ली, 2010.

2. स्वामी धीरेंद्र ब्रह्मचारी: योगासन विज्ञान, धीरेंद्र योग प्रकाशन, नई दिल्ली, 1966.

3. सरस्वती, स्वामी सत्यानंद: आसन, प्राणायाम, मुद्रा, बंध (APMB), योग प्रकाशन ट्रस्ट, मुंगेर, 2013.

4. एच. आर. नागेंद्र: आसन, प्राणायाम, मुद्रा, बंध, स्वामी विवेकानंद योग प्रकाशन, बैंगलोर, 2002.

5. ईश्वर भारद्वाज: सरल योगासन, सत्यमपब्लिशिंग हाउस, नई दिल्ली, 2018.

6. श्री राय सिंह चौहान: मुद्रा रहस्य, भारतीय योग संस्थान, नई दिल्ली, 2014.

7. डॉ विश्वनाथ प्रसाद संहा: ध्यान योग, भारतीय योग संस्थान, नई दिल्ली, 1987.

8. श्री देशराज: ध्यान साधना, भारतीय योग संस्थान, नई दिल्ली, 2015.

अनुशंसितडिजिटलप्लेटफॉर्मवेब लिंक:

1. www.rishikeshnathyogshala.com

अनुशंसित समकक्ष ऑनलाइन पाठ्यक्रम:

1. https://sahayji.com/hathayoga-course
2. https://theyogainstitute.org/

भाग द - अनुशंसित मूल्यांकन विधियां:

अनुशंसितसतत मूल्यांकन विधियां:

अधिकतम अंक: 50

विश्वविद्यालयीनपरीक्षा (वस्तुनिष्ठ) अंक:50

आकलन : **विश्वविद्यालयीन परीक्षा:** समय- 01.00 घंटे	वस्तुनिष्ठप्रश्न	50 x 1 = 50 **कुल अंक: 50**

कोई टिप्पणी/सुझाव:

PART A: Introduction			
Program: **Diploma**	Class: **B.C.A.**	Year: **II Year**	Session: **2022-23**
Subject:Computer Applications			

1.	Course Code	**S2-BCAA1T**	
2.	Course Title	**Data Communication and Computer Networks**	
3.	Course Type (Core Course/Elective/Generic Elective/ Vocational	**Core**	
4.	Pre-Requisite (if any)	To study this course, a student must have the basic knowledge of Computers.	
5.	Course Learning Outcomes(CLO)	• Demonstrate the Basic Concepts of Networking, Networking Principles, Routing Algorithms, IP Addressing and Working of Networking Devices. • Demonstrate the Significance, Purpose and application of Networking Protocols and Standards. • Describe, compare and contrast LAN, WAN, MAN, Intranet, Internet, AM, FM, PM and Various Switching Techniques. • Explain the working of Layers and apply the various protocols of OSI & TCP/IP model. • Analyze the Requirements for a Given Organizational Structure and Select the Most Appropriate Networking Architecture and Technologies. • Design the Network Diagram and Solve the Networking Problems of the Organizations with Consideration of Human and Environment. Install and Configure the Networking Devices.	
6.	Credit Value	6 Credits	
7.	Total Marks	Max.Marks : **30+70**	Min. Passing Marks:**33**

Dr. Goswami

PART B: Content of the Course		
Total No. of Lectures(in hours per week): **3 Hours per week**		
Total Lectures: **90 Hours**		
Unit	Topics	No. of Lectures
I	Network goals and application, Network structure, Network services, Example of networks and Network Standardization, Networking models: centralized, distributed and collaborative. Network Topologies: Bus, Star, Ring, Tree, Hybrid: Selection and Evaluation factors.	15
II	Theoretical Basis for Data communication, Transmission media, Twisted pair (UTP, STP), Coaxial Cable, Fiberoptics: Selection and Evaluation factors. Line of Sight Transmission, Communication Satellites. Analog and Digital transmission. Transmission and switching, frequency division and time division multiplexing, STDM, Circuit switching, packet switching and message switching,	20
III	Brief Overview of LAN (Local Area Network) : Classification. Brief overview of Wide Area Network (WAN). Salient features and differences of LAN with emphasis on: Media, Topology, Speed of Transmission, Distance, Cost. Terminal Handling, Polling, Token passing, Contention. IEEE Standards: their need and developments.	20
IV	Open System: What is an Open System? Network Architectures, ISO-OSI Reference Model, Layers: Application, Presentation, Session, Transport, Network, Data Link & Physical. Physical Layer - Transmission, Bandwidth, Signaling devices used, media type. Data Link Layer - : Addressing, Media Access Methods, Logical link Control, Basic algorithms/protocols.	20
V	Network Layer: Routing: Fewest-Hops routing, Type of Service routing, Updating Gateway routing information. Brief overview of Gateways, Bridges and Routers, Gateway protocols, routing daemons. OSI and TCP/IP model. TCP/IP and Ethernet. The Internet: The structure of the Internet, the internet layers, Internetwork problems. Internet Standards.	15

Dor Gosrani

PART C: Learning Resources

Textbooks, Reference Books, Other Resources

Suggested Readings:

1. Tannanbaum, A.S.: Computer Networks, Prentice Hall, 1985.processing, Prentice Hall,1983.

2. Black : Computer Networks : Protocols, standords and Interfaces, Prentice Hall International 1. Tannanbaum, A.S.: Computer Networks, Prentice Hall, 1985.processing, Prentice Hall,1983.

3. Fourauzan B., "Data Communications and Networking", 3rd edition, TataMcGraw-HillPublications,

Reference Books:

1. Comer D., "Computer Networks and Internet", 2ND Edition, PearsonEducation
2. S.K.Basandra& S. Jaiswal, "Local Area Networks", Galgotia Publications
3. William Stallings, "Data and Computer Communication"

4. Book published by M.P. Granth Academy , Bhopal

Suggested Web Links:

https://nptel.ac.in/courses/106/105/106105082/
http://cse.iitkgp.ac.in/~sandipc/courses/cs31006/slides/application_layer.pdf
https://onlinecourses.nptel.ac.in/noc22_ee61/preview
https://nptel.ac.in/course.html
https://pll.harvard.edu/subject/computer-networking
http://www.mphindigranthacademy.org/

http://www.mphindigranthacademy.org/

Part D-Assessment and Evaluation

Suggested Continuous Evaluation Methods:
Maximum Marks : 100
Continuous Comprehensive Evaluation (CCE) : 30marks University Exam (UE) 70marks

Internal Assessment : Continuous Comprehensive Evaluation (CCE):30	Class Test Assignment/Presentation	Total 30
External Assessment : University Exam Section: 70 Time : 03.00 Hours	**Section(A)** : Objective Questions **Section (B) :** Short Questions **Section (C) :** Long Questions	Total 70

Dr Goswami

PART A:**INTRODUCTION**			
Program: **Diploma**	Class:**BCA**	Year: **II Year**	Session:w.e.f. **2022-23**

Subject: **Computer Applications**

1.	Course Code	**S2-BCAA2T**	
2.	Course Title	**Database Management SystemsUsing PL/SQL**	
3.	Course Type (Core Course/ Discipline Specific Elective/ Generic Elective/ Vocational	**Core Course**(Theory)	
4.	Pre-Requisite (if any)	To study this course, a student must have the basic knowledge of Computers.	
5.	Course Learning Outcomes(CLO)	After completing this course student will be able to: • explain the features of database management systems and relational database. • design conceptual models of a database using ER modelling for real life applications and construct queries in relational algebra. • create and populate a RDBMS for a real-life application, with constraints and keys, using SQL. • retrieve any type of information from a database by formulating complex queries in SQL. • analyse the existing design of a database schema and apply concepts of normalization to design an optimal database.	
6.	Credit Value	**4 credits (4-TH)**	
7.	Total Marks	Max.Marks: **30+70**	**Min. Passing Marks:33**

PART-B:**CONTENT OF THE COURSE**

Total No. of Lectures-Tutorials-Practical (in hours per week): **L-4**

Total No. of Lectures: **60 L**

Unit	Topics	No. of Lectures
I	**Introduction to DBMS:** Why database? Characteristics of data in database, DBMS.Whatare database advantages of DBMS? **Database Architecture and Modeling:** Conceptual, physical and logical database models, Role of DBA, Database design. **Entity Relationship (ER) Model:** Components of ER-model, ER modeling symbols, Relationships. **Enhanced Entity Relationship (EER) Model:** An introduction, Superclass and	12

Dr Goswami

	subclass entity types, Specialization, Generalization, Attribute inheritance, Categorization& Aggregation. ***Keywords:*** *DBMS, DBA, Entity Relationship (ER), EER, Superclass, Subclass, Specialization, Generalization, Categorization & Aggregation.*	
II	**The Relational Data Model:** ***Fundamental Concepts:*** Relations, Null Values, Keys, Foreign Keys, Integrity Constraints - Entity Integrity & Relational Integrity. ***Normalization Process:*** First Normal Form, Functional Dependencies, Second Normal Form, Third Normal Form, Boyce-Codd Normal Form (BCNF), Fourth Normal Form; Other Normal Forms - Fifth Normal Form & Domain/Key Normal Form. ***Transforming a Conceptual Model to a Relational Model:***Transforming Objects Sets and Attributes, Transforming Models without External Keys, Transforming Specialization and Generalization Object Sets,*Transforming Relationships:* One-One Relationships, One-Many Relationships, Many-Many Relationships; Transforming Aggregated Object Sets, Transforming Recursive Relationships. ***Keywords:****Keys, Normalization, BCNF, Aggregated Object Sets, Recursive Relationships.*	12
III	**Relational database implementation:** **(a) Relational Algebra and Calculus** *Relational Algebra:*Union, Intersection, Difference, Product, Select, Project, Join - Natural, Theta & Outer Join, Divide, Assignment. *Relational Calculus:* Target list & Qualifying Statement, The Existential Quantifier, The Universal Quantifier. ***Keywords:*** *JOIN, Target list, Existential Quantifier, Universal Quantifier.*	12
IV	**Relational database implementation (continued):** **(b) Relational Implementation with SQL** *Relational Implementations:* An Overview. *Schema and Table Definition:* Schema definition, Data types & domains, Defining Tables, Column Definition. *Data Manipulation:* Simple Queries (SELECT, FROM, WHERE), Multiple-Table Queries, Subqueries, Correlated Subqueries, EXISTS and NOT EXISTS operators, Built-In Functions (SUM, AVG, COUNT, MAX, and MIN), GROUP BY and HAVING clause, Built-In Functions with Subqueries. *Relational Algebra Operations:* UNION, INTERSECT, EXCEPT, JOIN. *Database Change Operations:* INSERT, UPDATE, DELETE. Using SQL with Data Processing Languages; View Definition, Restrictions on View Queries and Updates. ***Keywords:****Schema, SELECT, Data Manipulation, Database Change Operation, View.*	12

Dr Goswami

V	**Physical Database Systems** Introduction, Physical Access of the Database. *Physical Storage Media:* Secondary Storage, Physical Storage Blocks. *Disk Performance Factors:* Access Motion Time, Head Activation Time, Rotational Delay, Data Transfer Rate, Data Transfer Time. *Data Storage Formats on Disk:* Track Format, Record Format–Fixed-Length Records & Variable-Length Records, Input/output Management. *File Organizing and Addressing Methods:* Sequential File Organization, Indexed-Sequential File Organization, Direct File Organization, Hashing: Static Hash Functions and Dynamic Hash Functions. ***Keywords:****Disk Performance Factors, Sequential File Organization, Indexed-Sequential File Organization, Direct File Organization, Hashing.*	12

PART C:**LEARNING RESOURCES**

Textbooks, Reference Books, Other Resources

Suggested Readings:

Textbooks:

1. Gary W. Hansen & James V. Hansen, "Database Management and Design", 2nd Ed., 2007, Prentice Hall of India Pvt Ltd.
2. Instructional Software Research & Development (ISRD) Group, Lucknow "Introduction to Database Management Systems", 2006, Ace Series, Tata McGraw Hill Publishing Company Limited, New Delhi
3. Ramez Elmasri, Shamkant B. Navathe, "Fundamentals of Database Systems", 7th Edition, 2016, Pearson

Reference Book:

1. Raghu Ramakrishnan & Johannes Gehrke, "Database Management Systems", 3rd Edition, 2014, McGraw Hill Education
2. C.J. Date,"An Introduction to Database System", 8th Edition, 2003, Pearson
3. Abraham Silberschatz, Henry F. Korth, S. Sudharshan, "Database System Concepts", 6th Edition, 2010, Tata McGraw Hill
4. Books published by M.P. Hindi Granth Academy, Bhopal

Suggestive digital platform web links

http://en.wikipedia.org/wiki/Relational_model
http://en.wikipedia.org/wiki/Relational_algebra
cs.nyu.edu/courses/Fall12/CSCI-GA.2433-001/lecture4.pdf
https://www.w3schools.in/dbms/database-normalization/
https://beginnersbook.com/2015/05/normalization-in-dbms/
https://ecomputernotes.com/fundamental/what-is-a-database/functional-dependence
http://www.mphindigranthacademy.org/

Suggested equivalent online courses

NPTEL Course: *INTRODUCTION TO DATABASE SYSTEMS***or***DATABASE DESIGN*

Dr Goswami

Part D-Assessment and Evaluation		
Suggested Continuous Evaluation Methods: Maximum Marks : 100 Continuous Comprehensive Evaluation (CCE) : 30marks University Exam (UE) 70marks		
Internal Assessment : Continuous Comprehensive Evaluation (CCE):30	Class Test Assignment/Presentation	Total 30
External Assessment : University Exam Section: 70 Time : 03.00 Hours	**Section(A)** : Objective Questions **Section (B) :** Short Questions **Section (C) :** Long Questions	Total 70

Dr Goswami

PART A: **INTRODUCTION**			
Program: **Diploma**	Class: **BCA**	Year: **II Yr**	Session: w.e.f. **2022-23**
Subject: **Computer Applications**			

1.	Course Code	**S2-BCAA2P**	
2.	Course Title	**DBMS Using PL/SQL Lab**	
3.	Course Type (Core Course / Discipline Specific Elective / Generic Elective / Vocational	**Core Course** (Practicals)	
4.	Pre-Requisite (if any)	To study this course, a student must have the basic knowledge of Computers.	
5.	Course Learning Outcomes (CLO)	This lab is based on the theory course of DBMS. This lab course involves the development of the practical skills in DBMS using MS-Access/Visual-FoxPro/SQL-Server/etc. This course is an attempt to upgrade and enhance students' theoretical skills and provide the hands-on experience. After completing this lab course sessions, student will be able: • to create Databases & Views, • execute simple & advance SQL queries, • use DBMS tools in the areas of database applications. **Topics to be covered in the lab syllabus** ☐ Introduction to MS-Access/Visual-FoxPro/SQL-Server/etc ☐ Hands on practice on the application package used in the lab (*i.e.* on MS-Access/Visual-FoxPro/SQL-Server/etc) ☐ Database creation using MS-Access/Visual-FoxPro/SQL-Server/etc ☐ Simple SQL queries (Single table retrieval) ☐ Use of Advanced SQL queries ☐ Implementation of Views	
6.	Credit Value	**2 credits (2-PR)**	
7.	Total Marks	Max. Marks: **30 Int + 70 Ext**	**Min. Passing Marks: 33**

PART B: **CONTENT OF THE COURSE**
Total No. of Lectures-Tutorials-Practical (in hours per week): **P - 2**
Total Number of Practical: **02 Hours per Week**

Practicum details:

Students are required to practice the concepts learnt in the theory by designing and querying a database for a chosen organization (Like: College, Library, Transport, etc). The teacher may devise appropriate weekly lab assignments to help students practice the designing, querying a database in the context of example database. Some indicative list of experiments with their aim, problem definition, theory is given below:

Experiment-1

Aim: To draw ER Model and Relational Model for a given database. Show ER to Relational Model reduction.

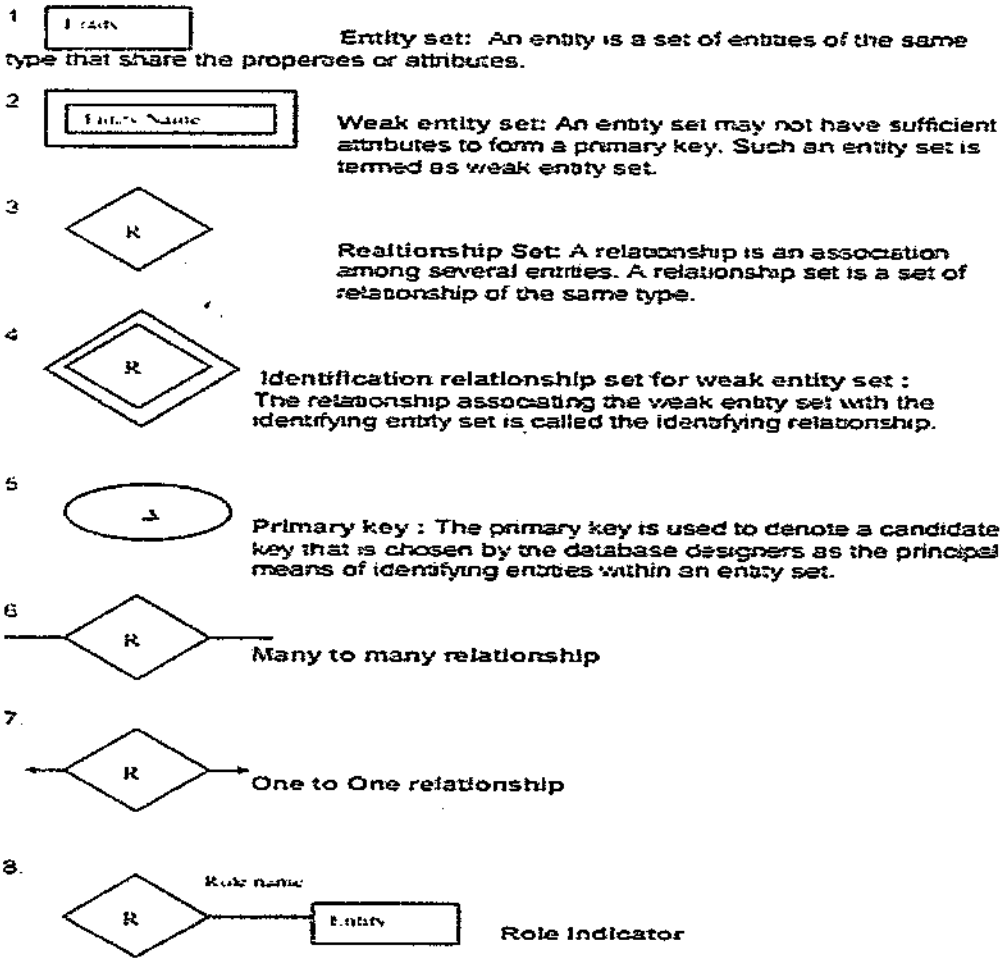
Resources used: MS-Access/Visual-FoxPro/SQL-Server/etc

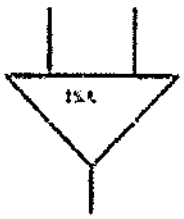
Problem Definition: List the data requirements for the database of the company which keeps track of the company employee, department and projects. The database designers provide the following description:

1. The company is organized into departments. Each department has unique name, unique number, and particular employee to manage the department. We keep track of the start date and the employee begins managing the department. The department has several locations.
2. The department controls a number of projects each of which has a unique name, unique number and a single location.
3. We store each employee names social security number, address, salary, sex and dob. An employee is assigned one department but may work on several projects which are not necessarily controlled by the same department. We keep track of the department of each employee works on each project and for insurance purpose. We keep each dependent's first name, sex, dob and relation.

Theory: The ER data model was developed to facilitate the database design by allowing specification of an enterprise schema that represents the overall logical structure of the database. The ER model data model is one of the several data models. The semantic aspect of the model lies in its representation of the meaning of the data. The ER model is very useful many database design tools drawn on concepts from the ER model. The ER model employs 3 basic notations: entity set, relationship set and attributes.

Symbols Used In ER Notation

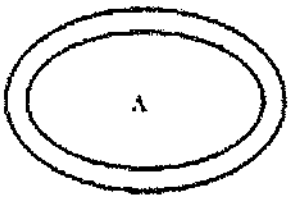


9. 

Total Generalization

10. 

Attribute

11. 

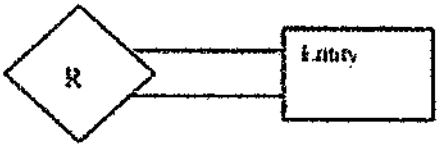
Multi valued Attribute

12. 

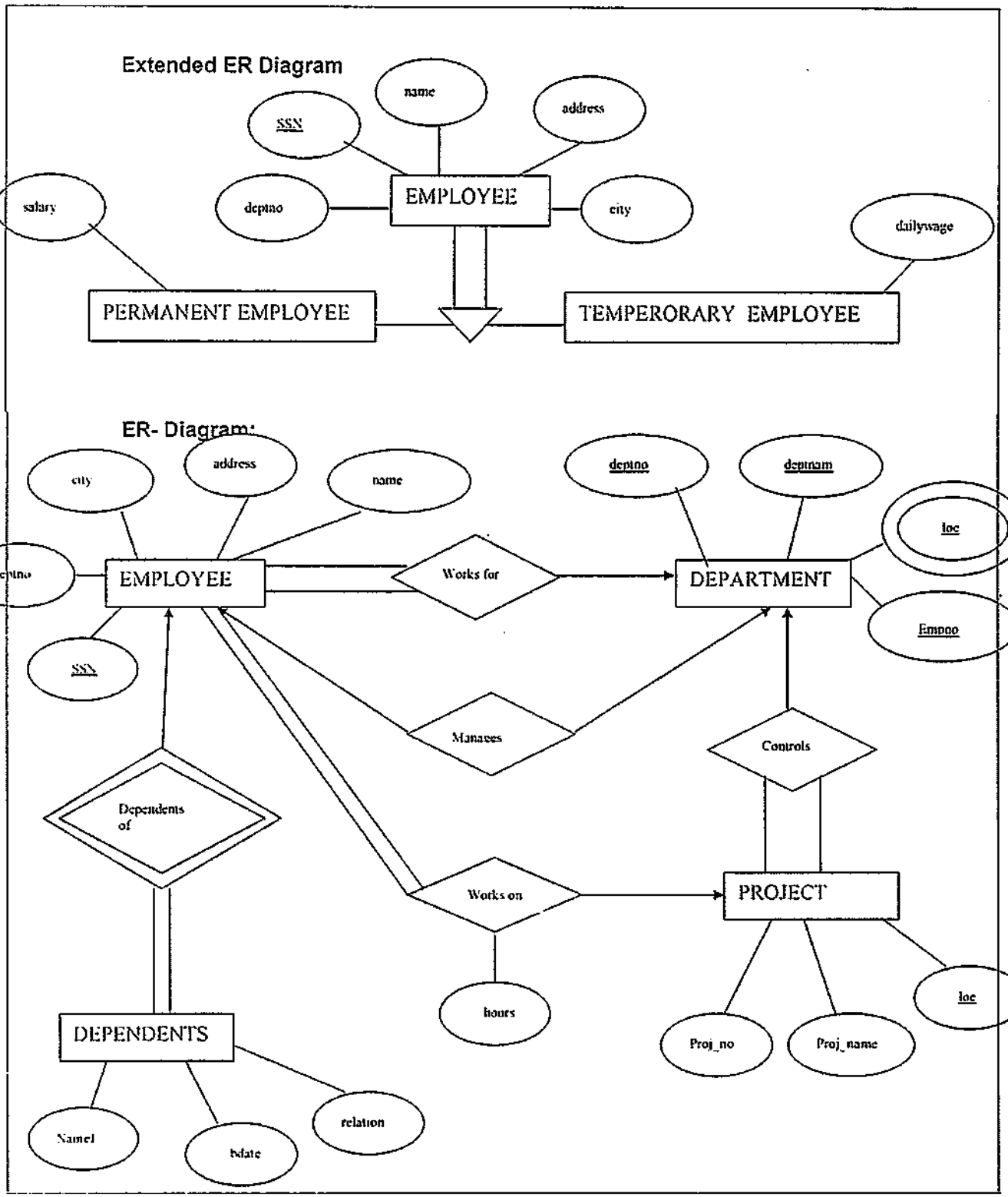
Derived Attribute

13. 

Discriminating Attribute of weak entity set : The discrimination of weak entity set is a set of attributes that allows the distinction to be made.

14. 

Total Participation of entity set in relationship: The participation of an entity set E in a relationship set R is said to be total if every entity in E participates in at least one relationship in R.


Extended ER Diagram
name
SSN
address
salary
deptno
EMPLOYEE
city
dailywage
PERMANENT EMPLOYEE
TEMPERORARY EMPLOYEE
ER- Diagram:
city
address
name
deptno
deptnam
loc
deptno
EMPLOYEE
Works for
DEPARTMENT
Empno
SSN
Manages
Controls
Dependents of
Works on
PROJECT
hours
loc
DEPENDENTS
Proj_no
Proj_name
Name1
bdate
relation

Relational Model:

Employee

fname	SSN	address	salary	city	deptno

Department

deptno	deptname	mgr_SSN

Department_Location

deptno	deptloc

Project

projno	projname	location	deptno

Works on

SSN	hours	projname

Dependents

name1	relation	bdate	SSN

Employee

SSN
fname
address
salary
city
deptno

Department

deptno
deptname
mgr_SSN

Department Location

deptno
deptloc

Project

projno
projname
location
deptno

Works on

SSN
hours
projno

Dependents

name1
relation
bdate
SSN

Conclusion: We have drawn ER model and Relational Model for the same.

Experiment-2

Aim: Implementation Database

1. Creation of Database with proper constraints (Pk, Fk,.....etc)
2. Insert into database using different types of insert statements
3. Display

Resources used: MS-Access/Visual-FoxPro/SQL-Server/etc

Theory: The set of relations in a database must be specifies to the system by means of a data definition language (DDL). The SQL DDL allows specification of not only a set of relations but also specific information about the relation including:

1. The schema for each relation
2. The domain of values associated with each attribute
3. The integrity constraints
4. The set of indices to be maintained for each relation
5. The security and authorization information for each relation
6. The physical storage structure of each relation on disk

Create Table

create table tab (A_1D_1, A_2D_2, ……, A_nD_n, *<integrity constraint-1>,.....<integrity constraint-k>)*

where tab is the name of the relation each A_i is the name of the attribute in the schema of relation tab and D_i is the domain type of the values in the domain of attribute A_i. There are a number of different allowable integrity constraints. We specify here only the primary key for the relation.

Insert

A newly created relation is empty initially. We can use the insert command to load data into the relation.

insert into <table name> values (A_1, A_2, ……, A_n)

The values are specified in the order in which the corresponding attributes are listed in the relation schema.

Display

To display the table after creation and insertion we use the following syntax:

*select * from <table name>*

Select clause is used to list the attributes desired in the result of a query. It corresponds to the projection operation of the relational algebra. From clause lists the relations to be scanned in the evaluation of the expression. The asterisk symbol ("*") is used to denote "all attributes".

Conclusion

Thus, we have successfully created the database of company and inserted values in the database.

(DN Goswami)

Experiment-3

Aim: Data Definition (schema) Modification

1. Alter table: add column, remove column, add constraint, remove constraint
2. Drop table
3. Show schema of any table
4. Applying different constraints check, not null, etc.

Resources used: MS-Access/Visual-FoxPro/SQL-Server/etc

Theory: The various command, clauses, functions used for the modification of database are as follows:

(1) Alter table: Alter table command is used to add attribute to an existing relation. All the tuples are assigned to null as the values for the new attribute. The form of the alter table command is

Alter table r add A D

Where, *r* is the name of an existing relation. *A* is the name of the attribute to be added and *D* is the domain of the added attribute. We can drop attribute from a relation by the command:

Alter table r drop A

(2) Update: In certain situation we may wish to change a value in a tuple without changing all values in the tuple. For this purpose, the update statement can be used, as we could for insert and delete. We can choose the tuple be updated by using a query.

eg, update EMPLOYEE
set age=20
where SSN=514065

The preceding update statement is applied only to tuple where SSN=514065. If we want same changes in all tuples, then we write

Update EMPLOYEE
set age=20

(3) Drop Table: To remove a relation from an SQL database we use the drop table command. The drop table command deletes all information about the dropped relation from the database

drop table r

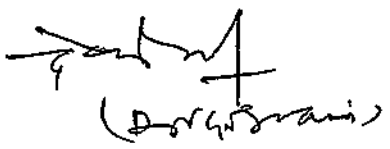
The relation r and to delete all tuples from r, the following command is used.

delete from r

(4) Adding and Removing Columns: To add a column to an existing relation, we use

alter table r
add A D

eg. alter table EMPLOYEE
add age int



To remove a column from an existing relation we use

Alter table r
drop column A

Eg. alter table EMPLOYEE
drop column age

(5) Not Null: The not null specification prohibits the insertion of a null value. For a attribute any database modification that would cause null to be inserted in an attribute declared to be not null generates an error diagnostic. If an attribute is declared as the primary key then it cannot take a null value.

Eg. alter table EMPLOYEE
alter column salary int NOT NULL

(6) Check: The heck clause in SQL can be applied to relation declarations as well to domain declarations when applied to a relation declaration, the clause check(p) specified a predicate p that must be specified by every tuple in a relation. A common use of the check clause is to ensure that the attribute value satisfy specified condition.

Eg, alter table EMPLOYEE
add constraint em_age
check (age>19)

Conclusion: Thus, we have executed all the queries required for the modification of database.

Experiment-4

Aim: Simple SQL queries (Single table retrieval)

1. Make use of different operators (relational, logical etc.)
2. Selection of rows and columns, renaming columns, use of distinct keyword
3. String handling (%, etc.)
4. Update statement, case update
5. Delete, cascade delete (if possible)

Resources used: MS-Access/Visual-FoxPro/SQL-Server/etc

Theory:

1. Select clause: Select clause is used to list the attributes desired in the result of a query. It corresponds to the projection operation of the relational algebra:

*Eg. select *from EMPLOYEE*
-all attributes
select fname, SSN from EMPLOYEE
-only fname and SSN

2. from clause: From clause lists the relations to be scanned in the evaluation of the expansion.

3.where clause: The where clause corresponds to the selection predicate of the relational algebra. It consists of a predicate involving attribute of the relations that appear in the from clause.

(i) and: and clause is used when we want a result and all the conditions are satisfied in the where clause.

True and unknown = true
False and unknown = unknown
Unknown or unknown = unknown

(ii) as (Rename operator): SQL provides a mechanism for renaming both relations and attributes. It uses the as clause taking the form

old_name as new_name

(iii) distinct: If we want to eliminate duplicates, we use the keyword distinct in the aggregation expression.

eg. *select distinct salary*
from EMPLOYEE

(iv) ***String operations:*** The most commonly used operations on strings are pattern matching using the operation like we describe the patterns by using the two special characters % and _.

%: The % character matches any substring
_: The character matches any character

eg, 'Perry%' matches any string beginning with "Perry".
'%idge%' matches any string containing "idge" as substring
"_ _ _" matches any string of exactly three characters
"_ _ _%" matches any string of at least three characters

(v) ***Update and Case Update:*** In certain situations, we may wish to change a value in a tuple without changing all the values in the tuple. For this purpose, the update statement can be used.

eg. update EMPLOYEE
set age=20
where SSN=514065

SQL provides a case construct which we can use to perform both the update with a single update statement avoiding the problem with the order of updates.

eg. *update account*
set balance =case
when balance<=1000
*then balance*1.05*
*else balance*1.06*
end

(vi) ***delete:*** To delete a tuple from relation r, we use the following command

delete from r
where, r is the name of the relation

Conclusion: Thus, we have executed simple queries in SQL.

Experiment-5

Aim: Advanced SQL Queries-1

1. Group by, having clause, aggregate function
2. Set operations like union, union all and use of order by clause
3. Nested queries: in, not_in, exists, not exists and any, all

Resources used: MS-Access/Visual-FoxPro/SQL-Server/etc

Theory:

1. Group by clause: These are circumstances where we would like to apply the aggregate functions to a single set of tuples but also to a group of sets of tuples, we would like to specify this wish in SQL using the group by clause. The attributes or attributes given by the group by clause are used to form groups. Tuples with the same value on all attributes in the group by clause placed in one group:

eg.
select dept_no, avg(sal) as avg_sal
from EMPLOYEE
group by dept_no

2. ***Having clause:*** A having clause is like a where clause but only applies only to groups as a whole whereas the where clause applies to the individual rows. A query can contain both where clause and a having clause. In that case

   a. The where clause is applied first to the individual rows in the tables or table structures objects in the diagram pane. Only the rows that meet the conditions in the where clause are grouped.
   b. The having clause is then applied to the rows in the result set that are produced by grouping. Only the groups that meet the having conditions appear in the query output.

   eg.

```
select dept_no from EMPLOYEE
group_by dept_no
having avg (salary) >=all
(select avg (salary)
   from EMPLOYEE
   group by dept_no)
```

3. ***Aggregate functions:*** Aggregate functions such as SUM, AVG, count, count (*), MAX and MIN generate summary values in query result sets. An aggregate functions (with the exception of count (*) processes all the selected values in a single column to produce a single result value:

   eg.

```
select dept_no, count (*)
from EMPLOYEE
group by dept_no
```

   eg.

```
select max(salary) as maximum
from EMPLOYEE
```

   eg.

```
select sum(salary) as total_salary
from EMPLOYEE
```

   eg.

```
select min(salary) as minsal
from EMPLOYEE
```

4. ***Union and Union Operators:*** Combines the result of two or more queries into a single result set consisting of all the rows belonging to all queries in the union. This is different from using joins that combine columns from two tables. Two basic rules for combining the result sets of two queries with union are:

   A. The number and the order of the columns must be identical in all queries.
   B. The data types must be compatible:

```
select max(salary) as maximum
from EMPLOYEE
union
select min(salary)
from EMPLOYEE
union
```

   Specifies that multiple result two or more queries into a single result set consisting of all the rows belonging to all queries into single result set consisting of all the rows belonging to all queries in the union. This is different from using joins that combine columns from two tables. Two basic rules are followed.

5. *Order by clause:* SQL allows the user to order the tuples in the result set of the query of a query by the values of one or more attributes using the order by clause. The default order is in the increasing order of values. We can specify the keyword DES if we want values in descending order.

6. *Exists and not exists:* Subqueries introduced with exists and not queries can be used for two seet theory operations: Intersection and Difference. The intersection of two sets contains all elements that belong to both of the original sets. The difference contains elements that belong to only first of the two sets.

   eg.

   *select *from DEPARTMENT*
   *where exists (select * from PROJECT*
   where DEPARTMENT.dept_no=PROJECT.dept_no)

7. *IN and NOT IN:* SQL allows testing tuples for membership in a relation. The "IN" connective tests for set membership where the set is a collection of values produced by select clause. The "NOT IN" connective tests for the absence of set membership. The IN and NOT IN connectives can also be used on enumerated sets.

   eg.

   select proj_name from PROJECT
   where dept_no not in (select dept_no from DEPARTMENT
   where dept_name="chemistry")

   eg.

   select fname from EMPLOYEE
   where SSN in (select mgr_SSN from DEPARTMENT)

Conclusion: Thus, we have studied and executed all the queries mentioned using various clauses.

Experiment-6

Aim: Advanced SQL Queries -2.

(1) Join (Inner & Outer)
(2) Exists & Union

Resources used: MS-Access/Visual-FoxPro/SQL-Server/etc

Theory:

JOINS: SQL joins are used to query data from two or more tables, based on a relationship between certain columns in these tables.

Type of JOIN:

- **Equi Joins:**

This operation allows to connect, with a relation of equality, the tables which have at least a common attribute. One must have *n-1* conditions of join, *n* being the number of tables which intervene in the query.

If no condition of join is specified, the corresponding query will realize the Cartesian product of the implied tables.

Syntax:

```
SELECT TABLE1.col1, TABLE1.col2...
TABLE2.col1, TABLE2.col2...
FROM table_name1, table_name2
WHERE table_name1.col1 = table_name2.col2
```

TYPE OF Equi-Joins:

An equi-join is further classified into two categories:

(a) Inner Join
(b) Outer Join

(a) Inner Join:

The INNER JOIN keyword return rows when there is at least one match in both tables.

Syntax:

```
SELECT column_name(s)
FROM table_name1
INNER JOIN table_name2
ON table_name1.column_name=table_name2.column_name
```

(b) Outer Joins:

The outer join is returning all the rows returned by simple join or equijoin as well as those rows from one table that do not match any row from the other table, the symbol (+) represents outer join. the outer table operator can appear only on side of the expression.

Type of Outer Joins:

- **Left OUTER JOIN:** Return all rows from the left table, even if there are no matches in the right table.

  Syntax:

  ```
  SELECT TABLE1.column.....
  TABLE2.column.....
  FROM table_name1, table_name2
  WHERE table_name1.column(+) = table_name2.column;
  ```

- **Right OUTER JOIN:** Return all rows from the right table, even if there are no matches in the left table.

  Syntax:

  ```
  SELECT TABLE1.column.....
  TABLE2.column.....
  FROM table_name1,table_name2
  WHERE table_name1.column = table_name2.column(+);
  ```

EXISTS

EXISTS uses a subquery as a condition, where the condition is True if the subquery returns any rows, and False if the subquery does not return any rows.

Syntax:

```
SELECT columns
FROM tables
WHERE EXISTS (subquery);
```

UNION

There are occasions where you might want to see the results of multiple queries together, combining their output; use UNION.

The SQL UNION operator combines two or more SELECT statements.

Syntax:

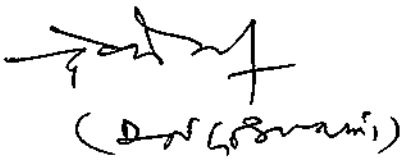
```
SELECT column_name(s) FROM table_name1
UNION
SELECT column_name(s) FROM table_name2
```

Notice that SQL requires that the Select list (of columns) must match, column-by-column, in data type This concept is useful in situations where a primary key is related to a foreign key, but the foreign key value for some primary keys is NULL. For example, in one table, the primary key is a salesperson, and in another

(Dr Goswami)

table is customers, with their salesperson listed in the same row. However, if a salesperson has no customers, that person's name won't appear in the customer table.

Conclusion: Thus, we have studied and executed all the queries mentioned using various clauses.



Experiment-7

Aim: Implementation of views.

1. *Creation of views*
2. *Usage of views*
3. *Creation of views using views*
4. *Drop view*

Resources used: MS-Access/Visual-FoxPro/SQL-Server/etc

Theory:

Views: Any relation that is not part of any logical model but is made visible to the user as a virtual relation is called as a view. It is possible to support a large number of views on the top of any given set of actual database relation. Views help in 2 ways:

1. For security purpose
2. Create a personalized collection of relation that is better user's intuition than is logical model

Creation of Views:

1. Views is defined using 'create view' command
2. To define a view we must give the view a better name and must state the query that computes the view.

   Syntax:

   create view<view name> as <query expression>

   Where query expression is any legal query expression.
3. Once we have defined a view, we can use the view name to refer to the virtual relation that the view generation.
4. Attribute name of the view can be specified explicitly as:

   Create view V(VA_1, VA_2,.....VA_n) as select (A_1,A_2,.....,A_n) from R_I where(p)

   where, p: predicate

   R_I: relation

   A_I-A_n: attribute of view

   V: view name

Creation of views using VIEW:

Since, view relations may appear in any place that a relation name may appear, except for restrictions on the use of views in update expressions. Thus, one view may be used in the expression defining another view. For eg. Let Emp_work_info is a view with attribute F_name, SSN, Project_no, Work_hrs. Then creation of other view can be done as:

create view new_view
select f_name, work_hrs
from emp_work_info

Updating of views

Although views are useful for the queries, they present a serious problem. If we express updates insertion or deletion on view as the modification done to the database in terms of the views must be translated to a modification to actual relations in the logical methods of database,

Drop view

A view creates earlier can be dropped using 'Drop View' command

Syntax:

Drop view 'r'

where, r: View Name.

It deletes all the information about view from the database.

PART C:**LEARNING RESOURCES**
Textbooks, Reference Books, Other Resources
Suggested Readings:
1. Dr Rajeev Chopra, "Database Management System (DBMS) A Practical Approach", 2010, S Chand 2. Jitendra Patel, "DBMS Lab Manual" Kindle Edition, 2012 3. Books published by M.P. Hindi Granth Academy, Bhopal
Suggestive digital platform web links
https://gfgc.kar.nic.in/raibag/FileHandler/270-101d616b-255a-4add-8d9b-dd2e22fec7c1.pdf https://pesitsouth.pes.edu/pdf/2019/July/CS/LM_DBMS%20LAB.pdf http://www.mphindigranthacademy.org/
Suggested equivalent online courses
Nil

Part D-Assessment and Evaluation

Suggested Continuous Evaluation Methods:

Internal Assessment	Marks	External Assessment	Marks
Class Interaction /Quiz		Viva Voce on Practical	
Attendance		Practical Record File	
Assignments (Charts/ Model Seminar / Rural Service/ Technology Dissemination/ Report of Excursion/ Lab Visits/ Survey / Industrial visit)		Table work / Experiments	
TOTAL	30		70

Any remarks/suggestions: Students should also prepare a small Audio-video clip to present the details of

- Assignments submitted
- Imparting training of common online citizen services or software tools

Dr Goswami

PART A: Introduction				
Program: **Diploma**		Class: **BCA**	Year: **II Year**	Session: **2022-23**
Subject: **Computer Applications**				
1.	Course Code	**S2-BCAB2T**		
2.	Course Title	**Internet Applications using Java Programming**		
3.	Course Type (Core Course/Elective/Generic Elective/ Vocational	**Core Course**		
4.	Pre-Requisite (if any)	To study this course, a student must have basic knowledge of Object-Oriented Programming.		
5.	Course Learning Outcomes (CLO)	**After the completion of this course, a successful student will be able to do the following:** • Use an integrated development environment to write, compile, run, and test simple object-oriented Java programs. • Read and make elementary modifications to Java programs that solve real-world problems. • Validate input in a Java program. • Design and use basic applet for web page		
6.	Credit Value	**Theory – 4 Credits Practical – 2 Credits**		
7.	Total Marks	Max. Marks : **30+70**	Min. Passing Marks: **33**	

PART B: Content of the Course		
No. of Lectures (in hours per week): **2 Hrs. per week**		
Total No. of Lectures: **60 Hrs.**		
Module	**Topics**	**No. of Lectures**
I	**The Java Environment:** History and features of java, C++ Vs java,OOPs concept, how java works, the concept of PATH and CLASS PATH, A simple program, its compilation and execution, JAVA Program Structure, Java Virtual Machine concepts, java platform overview, Primitive data types, variables and constants, operators, expression,statement-branching,looping and jumping, labeled statements. **Object Oriented Programming in Java:** Classes, objects and methods: defining a class, adding variables and methods, creating objects, constructor, Instances, field and methods initialization by constructors,Copy constructor, memory allocation and garbage collection in java keywords, access methods Arrays, String and String buffer classes, Wrapper classes, using the JDK tools.	10

Dr Goswami

II	**Inheritance**: Inheritance basics, Super class, Sub-class, Method overloading, abstract classes **Interfaces**: defining an interface, implementing & applying interfaces, variables in interfaces, extending interfaces. **Multithreading and Exception Handling:** Basic idea of multithreaded programming; The lifecycle of a thread, Creating thread with the thread class and runnable interface, Thread synchronization, Thread scheduling, Basic idea of exception handling: The try, catch and throw, throws	14
III	**Applet programming**-Local and Remote Applets, Applet Vs Application, creating and executing java applets, inserting applets in a web page, java security, passing parameter to applets, Aligning the Display,HTML Tags & Applet Tag, Getting Input from User. The AWT: The class hierarchy of window fundamentals; The basic user interface components Label, Button, Check Box, Radio Button, Choice menu, Text area, Scroll list, Scroll bar; Frame; Layout managers-flow layout, Grid layout, Border layout, Card layout.	12
IV	**The Java Event Handling Model**: Java's event delegation model ignoring the event, Self contained events, Delegating events, The event class hierarchy, The relationship between interface, methods called, parameters and event source; Adapter classes, Event classes action Event, Adjustment Event, Container Event, Focus Event, Item Event, Event, Mouse Event, Text Event, Window Event. Networking-basics, networking classes and interfaces, using java.net package, TCP/IP and datagram programming.	12
V	**Input/ Output**: Exploring Java i.o, Directories, stream classes The Byte Stream : Input stream, output stream, file input stream, file output stream, print stream, Random access file, the character streams, Buffered reader, buffered writer, print writer, serialization. **JDBC**: JDBC-ODBC bridge, The connectivity model; The driver manager, Navigating the result set object contents, java.sql Package, The JDBC exception classes, Connecting to Remote database.	12

PART C: Learning Resources

Textbooks, Reference Books, Other Resources

Suggested Readings

Textbooks:

- Schildt java Complete Reference TMH
- Das Rashmikanta Core Java, IE, Vikas
- Bansal Nitin, AjitKumar,A Simplified approach to Java Programming , KALYANI
- Naughton&Schildt "The Complete Reference Java 2", Tata McGraw Hill
- Deitel "Java- How to Program:" Pearson Education, Asia
- Horstmann& Cornell "Core Java 2" (Vol I & II) , Sun Microsystems

Dor Gosmani

- IvanBayross "Java 2.0" : BPB publications
- Ivor Horton's "Beginning Java 2, JDK 5 Ed., Wiley India.
- Book published by M.P. Granth Academy , Bhopal

Suggestive digital platform web links

https://www.youtube.com/watch?v=CFD9EFcNZTQ
https://www.youtube.com/watch?v=7WhnYwoBY24
http://www.mphindigranthacademy.org/

Suggested equivalent online courses

S.No.	Online Course	Duration	Platform
1	Programming in Java https://youtu.be/J_d1fJy90GY	12 weeks	NPTEL
2	The Complete Java Certification Course https://www.udemy.com/course/master-practical-java-development/	Self paced	Udemy

Part D-Assessment and Evaluation

Suggested Continuous Evaluation Methods:

Maximum Marks : 100

Continuous Comprehensive Evaluation (CCE) : 30marks University Exam (UE) 70marks

Internal Assessment : Continuous Comprehensive Evaluation (CCE):30	Class Test Assignment/Presentation	Total 30
External Assessment : University Exam Section: 70 Time : 03.00 Hours	**Section(A)** : Objective Questions **Section (B) :** Short Questions **Section (C) :** Long Questions	Total 70

Dr Goswami

PART A: Introduction				
Program: **Certificate**		Class: **B.C.A.**	Year: **III Year**	Session: **2021-22**
Subject: **Computer Applications**				
1.	Course Code	**S2-BCAB2P**		
2.	Course Title	**Java Programming Lab**		
3.	Course Type (Core Course/Elective/Generic Elective/ Vocational	**Core Course**		
4.	Pre-Requisite (if any)	To study this course, a student must have basic logical and analytical skills.		
5.	Course Learning Outcomes(CLO)	**After the completion of this course, a successful student will be able to do the following:** 1. Develop simple applications of java. 2. Implementation and use of conditional statement. 3. Learn to formulate iterative solutions and array processing algorithms for problems. 4. Learn to implement method Overloading and Overriding. 5. Implementation of inheritance and interface in java. 6. Develop a small applet program using awt.		
6.	Credit Value	**Practical – 2 Credits**		
7.	Total Marks	Max. Marks : **30+70**	Min. Passing Marks: **33**	

PART B: Content of the Course

No. of Lab Practicals (in hours per week): **2 hours per week**

Total No. of Lab.: 30 **(each lab of 2 hours)**

	Suggestive list of Practicals	No. of Labs.
	Given the problem statement, students are required to write code in Java, execute and test it. Students should be given assignments on following : 1. Write a program to print numbers in words using **Nested if and Switch Case.** 2. Write a program called **PassFail** which prints "PASS" if the int variable "mark" is more than or equal to 50; or prints "FAIL" otherwise 3. Write a program called **OddEven** which prints "Odd Number" if the int variable "number" is odd, or "Even Number" otherwise. 4. Write a Program to find sum & average of 10 no. using arrays. 5. Write a program to display reverse of a digit no. using array. 6. Write a program to display grade according to the marks obtained by the student. 7. Find the factorial of number if number is given by user using	30

command line argument.

8. Write a program to print Fibonacci series.
9. Write a program to display tables from 2 to10.
10. Write a program to take an input from user and check given number is prime or not.
11. Write a program to implement method overriding.
12. Write a program to convert given string into. Uppercase and lowercase and get the length of string Using array
13. Write a program to overload volume method to find out volume of cube and cuboid.
14. Write a program to design a class using abstract Methods and Classes.
15. Write a program to implement multiple inheritance by using Interface.
16. Write a program to create a package of your name and use that package in a class
17. Write a program to implement parameterized constructor with default argument.
18. Define an exception called "Marks out of Bound" exception that is thrown if the entered marks are greater than 100.
19. Develop a simple real life application to illustrate the use of multithreading.
20. Design an applet that takes three numerical values as input from the user and then displays the largest of those three numbers on the screen

PART C: Learning Resources

Textbooks, Reference Books, Other Resources

Suggested Readings

- Naughton & Schildt "The Complete Reference Java 2", Tata McGraw Hill
- Java EE 6 for Beginners, Sharanam Shah, Vaishali Shah, Shroff Publishers and Distributors

Reference Books:

- Java EE Project using EJB 3, JPA and struts 2 for beginners, Shah, SPD
- Java Programming A practical Approach, C Xavier, McGraw Hill
- Java Server Faces A practical Approach for beginners, B M Harwani, Eastern Economy Edition (PHI).
- Advanced Java Technology, Savaliya, Dreamtech.

Suggestive digital platform web links

https://www.youtube.com/watch?v=CFD9EFcNZTQ
https://www.youtube.com/watch?v=7WhnYwoBY24

Suggested equivalent online courses

(Dr Gosrami)

Suggested equivalent online courses			
S.No.	**Online Course**	**Duration**	**Platform**
1	Programming in Java https://youtu.be/J_d1fJy90GY	12 weeks	NPTEL
2	The Complete Java Certification Course https://www.udemy.com/course/master-practical-java-development/	Self paced	Udemy

Part D-Assessment and Evaluation

Suggested Continuous Evaluation Methods:

Internal Assessment	Marks	External Assessment	Marks
Class Interaction /Quiz		**Viva Voce on Practical**	
Attendance		**Practical Record File**	
Assignments (Charts/ Model Seminar / Rural Service/ Technology Dissemination/ Report of Excursion/ Lab Visits/ Survey / Industrial visit)		**Table work / Experiments**	
TOTAL	**30**		**70**

Dr Goswami

PART A: Introduction			
Program: **Diploma**	Class: **BCA**	Year: **II Year**	Session: **2022-23**
Subject: **Computer Application (BCA)**			
1.	Course Code	**S2-BCAC1G**	
2.	Course Title	**Internet of Things (IOTs)**	
3.	Course Type (Core Course/ Elective/ Generic Elective/ Vocational	Generic Elective	
4.	Pre-Requisite (if any)	Student must have basic Computer Knowledge	
5.	Course Learning Outcomes (CLO)	**After completing this course student will be able to:** 1.To understand the basics of Internet of Things 2. To get an idea of some of the application areas where Internet of Things can be applied 3. To understand the middleware for Internet of Things and the concepts of Web of Things 4. To understand the concepts of Cloud of Things with emphasis on Mobile cloud computing 5. To understand the IOT protocols	
6.	Credit Value	**Theory – 4 Credits Practical – 2 Credits**	
7.	Total Marks	Max. Marks: **30+70**	Min. Passing Marks: **33**

Dr Goswami

PART B: Content of the Course		
No. of Lectures (in hours per week): **2 Hrs. per week**		
Total No. of Lectures (in hours): **60 Hrs.**		
Module	**Topics**	**No. of Lectures**
I	**Introduction** **Introduction:** Definition, Characteristics of IOT, IOT Conceptual framework, IOT Architectural view, Physical design of IOT, Logical design of IOT, Application of IOT.	8
II	Machine-to-machine (M2M), SDN (software defined networking) and NFV (network function virtualization) for IOT, data storage in IOT, IOT Cloud Based Services.	14
III	**Design Principles for Web Connectivity:** Web Communication Protocols for connected devices, Message Communication Protocols for connected devices, SOAP, REST, HTTP Restful and Web Sockets. Internet Connectivity Principles: Internet Connectivity, Internet based communication, IP addressing in IOT, Media Access control.	14
IV	Sensor Technology , Participatory Sensing, Industrial IOT and Automotive IOT , Actuator, Sensor data Communication Protocols ,Radio Frequency Identification Technology, Wireless Sensor Network Technology.	12
V	IOT Design methodology: Specification -Requirement, process, model, service, functional & operational view.IOT Privacy and security solutions, Raspberry Pi &arduino devices. IOT Case studies: smart city streetlights control & monitoring.	12

Dr Goswami

PART C: Learning Resources

Textbooks, Reference Books, Other Resources

Suggested Readings

Textbooks:

- Rajkamal,"Internet of Things", Tata McGraw Hill publication.
- HakimaChaouchi "The Internet of Things: Connecting Objects", Wiley publication.
- Francis dacosta "Rethinking the Internet of things: A scalable Approach to connecting everything", 1st edition, Apress publications2013.
- Donald Norris"The Internet of Things: Do-It-Yourself at Home Projects for Arduino, Raspberry Pi and BeagleBone Black", McGraw Hillpublication.

Reference books:

1. Philip Levis, " TinyOS Programming"
2. D. Norris, "The Internet of Things: Do-It-Yourself Projects with Arduino, Raspberry Pi, and Beagle Bone Black", McGraw-Hill Education, New Delhi.
3. Raj Kamal, "Internet of Things: Architecture and Design", Tata McGraw Hill publication.
4. A. Pajankar and A. Kakkar, "Raspberry Pi by Example", Packt Publishing Ltd, Birmingham,UK.
5. Books published by M.P. Hindi Granth Academy, Bhopal

Suggestive digital platform web links

- https://www.iotforall.com/introduction-iot-applications-in-education
- https://onlinecourses.swayam2.ac.in/arp19_ap52/preview
- http://www.mphindigranthacademy.org/

Part D-Assessment and Evaluation

Suggested Continuous Evaluation Methods:

Maximum Marks : 100

Continuous Comprehensive Evaluation (CCE) : 30marks University Exam (UE) 70marks

Internal Assessment : Continuous Comprehensive Evaluation (CCE):30	Class Test Assignment/Presentation	Total 30
External Assessment : University Exam Section: 70 Time : 03.00 Hours	**Section(A)** : Objective Questions **Section (B) :** Short Questions **Section (C) :** Long Questions	Total 70

Dr Goswami

PART A: Introduction			
Program: **Diploma**	Class: **BCA**	Year: **II Year**	Session: **2022-23**
Subject: **Internet of Things(IOTs)Practicals/Lab**			
1.	Course Code	**S2-BCAC1R**	
2.	Course Title	**Internet of Things (IOTs) Lab**	
3.	Course Type (Core Course/ Elective/ Generic Elective/ Vocational	**Elective**	
4.	Pre-Requisite (if any)	Open for all	
5.	Course Learning Outcomes (CLO)	**After completing this lab course, students will be able to:** 1. Arduino/Raspberry Concpet. 2. Knowledge of Digital Sensor. 3. Uses of DHT11 Sensors. 4. Knowledge of Bluetooth interface.	
6.	Credit Value	**Practical – 2 Credits**	
7.	Total Marks	Max. Marks: **30+70**	**Min. Passing Marks: 33**

Dr Goswami

PART B: Content of the Course	
No. of Lab. Practicals (in hours per week): 1 **Hr. per week**	
Total No. of Labs: **30 Hrs.**	
Suggestive List of Practicals	**No. of Labs.**
1. To interface LED/Buzzer with Arduino/Raspberry Pi and write a program to turn ON LED for 1 sec after every 2 seconds. 2. To interface Push button/Digital sensor (IR/LDR) with Arduino/Raspberry Pi and write a program to turn ON LED when push button is pressed or at sensor detection. 3. To interface DHT11 sensor with Arduino/Raspberry Pi and write a program to print temperature and humidity readings. 4. To interface motor using relay with Arduino/Raspberry Pi and write a program to turn ON motor when push button is pressed. 5. To interface OLED with Arduino/Raspberry Pi and write a program to print temperature and humidity readings on it. 6. To interface Bluetooth with Arduino/Raspberry Pi and write a program to send sensor data to smartphone using Bluetooth. 7. To interface Bluetooth with Arduino/Raspberry Pi and write a program to turn LED ON/OFF when '1'/'0' is received from smartphone using Bluetooth. 8. Write a program on Arduino/Raspberry Pi to upload temperature and humidity data to thingspeak cloud. 9. Write a program on Arduino/Raspberry Pi to retrieve temperature and humidity data from thingspeak cloud. 10. To install MySQL database on Raspberry Pi and perform basic SQL queries.	30 Hrs.

Dr Goswami

PART C: Learning Resources

Textbooks, Reference Books, Other Resources

Suggested Readings

- Vijay Madisetti and ArshdeepBahga, "Internet of things(AHand-on-Approach)" 1st Edition ,UniversalPress .
- HakimaChaouchi "The Internet of Things: Connecting Objects", Wiley publication.
- Charless Bell "MySQL for the Internet of things", Apresspublications.
- Francis dacosta "Rethinking the Internet of things: A scalable Approach to connecting everything", 1st edition, Apress publications2013.
- Book published by M.P. Granth Academy , Bhopal

Reference books:

- https://www.lnmiit.ac.in/Department/ECE/uploaded_files/Internet_of_Things_Lab_manual.pdf

Suggestive digital platform web links

https://www.corning.com/in-building-networks/worldwide/en/home/knowledge-center/practical-iot.html

Suggested equivalent online courses

https://onlinecourses.nptel.ac.in/noc21_cs17/preview

http://www.mphindigranthacademy.org/

Part D-Assessment and Evaluation

Suggested Continuous Evaluation Methods:

Internal Assessment	Marks	External Assessment	Marks
Class Interaction /Quiz		Viva Voce on Practical	
Attendance		Practical Record File	
Assignments (Charts/ Model Seminar / Rural Service/ Technology Dissemination/ Report of Excursion/ Lab Visits/ Survey / Industrial visit)		Table work / Experiments	
TOTAL	30		70

Dr Goswami

Part A: Introduction

Programme:	Class : II Year	Session : 2022-23
Subject :	**E-Commerce**	
Course Code	V2-COM-DIGT	
Course Title :		
Course Type:	Vocational	
Pre-requisite:		
Course Learning Outcomes	This paper aims to enhance skill for effective and contemporary applications of E-Commerce After completion of the course students will be able to: a) Describe the challenging needs of the society in the field of E-Commerce. b) Identify various activities and operations in the context of online transactions. c) Explain the steps in surfing of e-commerce websites. d) Describe various e-payment systems. e) Analyse security issues in E-Commerce.	
Credit Value	04	
Total Marks		

Part B: Content of the course

Total No. of Lectures (in hours per week)- 3		
Unit	Topic	No. of lectures
Unit – 1	**Introduction to E- Commerce** Concepts and significance of E-commerce; Driving forces of E-commerce; E-commerce business models - Key elements of a business model and categories; Design and launch of E-commerce website - Decisions regarding Selection of hardware and software; Outsourcing Vs in-house development of a website; Functions of E-Commerce; Types of E-Commerce; E-Commerce Systems and Prerequisites, Scope of E-Commerce.	8
Unit – 2	**E-Commerce Activities and Operations** Various E-Commerce activities; Various manpower associated with e-commerce activities; Types of E-Commerce Providers and Vendors; Modes of operations associated with E-Commerce; E-commerce applications in various industries (banking, insurance, payment of utility bills and others), e-marketing, e-tailing, online services, e-auctions, online portal, online learning, e-publishing and e-entertainment, online shopping.	7
Unit- 3	**E-payment System** E-payment Methods- Debit card, Credit card, Smart cards, E-Money, E-Wallets; Digital signatures- procedures and legal position; Payment gateways; Online banking- concepts, importance; Electronic fund transfer; Automated Clearing House. Automated Ledger Posting, Emerging modes and systems of E-payment (M-Paisa, PayPal and other digital currency), UPI Apps, Aadhar Enabled Payment Systems, BHIM App E-payments risks.	8
Unit- 4	**Security and Legal Aspects of E-commerce** E-commerce security – meaning and issues. Security threats in the E-commerce environment- security intrusions and breaches, attacking methods like hacking, sniffing, cyber-vandalism etc.; Technology solutions- encryption, security channels of communication, protecting networks, servers and clients. Overview of Information Technology Act, 2000-provisions related to secure electronic records.	7

Expected Job Role / career opportunities	E-Business Consultant, Customer Relation Manager, Business Analyst, Supply Chain Manager, Project Manager,Database Administrator.

	Practical	Total No. of lectures
	1. Help others to learn the use of e-wallet, e-payment, digital signatures. Prepare a report on the skills used by them to help others learn. 2. Use the internet banking facility to buy a product from any online website. 3. Open internet banking account and operate it. 4. Create their own YouTube channel and post one video on awareness of cyber security and crime 5.Clicking various E-Commerce websites and how to register and login on it. 6.Use the internet banking facility to buy a product from any online website. 7.Register the complaint regarding various issues i.e. refund, return, defective product and delay in delivery.	30

Part C-Learning Resources

Text Books, Reference Books, Other resources

1. E-commerce- Tulsiram Kundala,K.maheshwari- Himalya publication Nagpur
2. E-commerce- Dr. Sandeep Srivastava, Er. Meera Goyal - SBPD-New Delhi
3. E-commerce - Avriti Tangri - VK Global Publications Pvt
4. E-commerce - B. Bhardwaj Dr. RS, Garg - Galgotia Publishing Company
5. Essential of E-Commerce –M.K.Mallick - Sanjay Sahity Bhavan Agra
6 *Business on the Net: An Introduction to the whats and hows of E-commerce*. Noida, Uttar Pradesh: Agarwala, K. N., Lal, A., &Agarwala, D Macmillan Publishers India Limited.
7. *Electronic commerce- A Manager's Guide to E- Business*.- Diwan, P., & Sharma, S- Vanity Books International Delhi .

Suggested equivalent online courses: e-reading:

1.https://www.iare.ac.in/sites/default/files/lecture_notes/IARE_ECommerce_Lecture_Notes.pdf
2. https://oms.bdu.ac.in/ec/admin/contents/387_P16MCE4A_2020051801071611.pdf
3.https://www.gasckovilpatti.com/studymaterial/commerce/II%20MCOM%20E%20COMMERCE%20pKCM33.pdf
4. https://irp-cdn.multiscreensite.com/1c74f035/files/uploaded/introduction-to-e-commerce.pdf
5. https://backup.pondiuni.edu.in/storage/dde/dde_ug_pg_books/E-%20Commerce.pdf
6. https://www.tutorialspoint.com/e_commerce/e_commerce_tutorial.pd

(PROF.PAVAN MISHRA)
Chairman
Central Board of Studies (Commerce)
Department of Higher Education Govt. of M.P.

भाग अ - परिचय			
कार्यक्रम:		वर्ष: द्वितीय वर्ष	सत्र:2022-23

1	पाठ्यक्रम का कोड	V2-COM-DIGT
2	पाठ्यक्रम का शीर्षक	ई-कॉमर्स
3	पाठ्यक्रम का प्रकार	Vocational
4	पूर्वापेक्षा (यदि कोई हो)	नहीं
5	पाठ्यक्रम अध्ययन की परिलब्धियां (कोर्स लर्निंग आउटकम) **(CLO)**	इस पेपर का उद्देश्य ई-कॉमर्स के प्रभावी और समकालीन अनुप्रयोगों के लिए कौशल को बढ़ाना है, पाठ्यक्रम पूरा होने के बाद छात्र निम्न में सक्षम होंगे: अ) ई-कॉमर्स के क्षेत्र में समाज की चुनौतीपूर्ण आवश्यकताओं का वर्णन ब) ऑनलाइन लेन-देन के संदर्भ में विभिन्न गतिविधियों और संचालन की पहचान। स) ई-कॉमर्स वेबसाइटों की सर्फिंग के चरणों की व्याख्या द) विभिन्न ई-भुगतान प्रणालियों का वर्णन इ) ई-कॉमर्स में सुरक्षा मुद्दों का विश्लेषण
6	क्रेडिट मान	04
7	कुल अंक	

भाग ब- पाठ्यक्रम की विषयवस्तु

व्याख्यान की कुल संख्या (प्रति सप्ताह घंटे में): :

इकाई	विषय	व्याख्यान की संख्या
1	**ई-कॉमर्स का परिचय** ई-कॉमर्स की अवधारण एवं महत्व, ई-कॉमर्स की प्रेरक शक्ति, ई-कॉमर्स के व्यावसायिक प्रतिदर्श (मॉडल),व्यवसाय के रूप में आवश्यक तत्व एवं वर्ग, ई-कॉमर्स वेबसाइट का निर्माण, हार्डवेयर एवं सॉफ्टवेयर का चयन, वेबसाइट का विकास - आउटसोर्स बनाम आंतरिक, ई-कॉमर्स के कार्य, ई-कॉमर्स के प्रकार, ई-कॉमर्स का क्षेत्र, प्रणालियां एवं पूर्वापेक्षाऐं।	8
2	**ई-कॉमर्स गतिविधियॉं एवं संचालन** ई-कॉमर्स की विभिन्न गतिविधियॉं और उसमें नियोजित मानव संसाधन, ई-कॉमर्स विक्रेता एवं प्रदाता, ई-कॉमर्स संचालन के रूप, विभिन्न उद्योगों में ई-कॉमर्स का उपयोग जैसे :- बैंक, बीमा एवं अन्य संस्थाओं के बिलों का भुगतान, ई-भुगतान, ई-विपणन, ई–मिलान,ई-नीलाम, ऑनलाइन पोर्टल सेवा, ई-प्रकाशन, ई-मनोरंजन, ऑनलाइन खरीदना-बेचना।	7
3	**ई-भुगतान पद्धति** ई-भुगतान पद्धति –डेबिट कार्ड, क्रेडिट कार्ड, स्मार्ट कार्ड, ई-मुद्रा, ई-वॉलेट, डिजिटल हस्ताक्षर प्रक्रिया एवं कानूनी प्रावधान,भुगतान गेट-वे, ऑनलाइन बैंकिंग, इलेक्ट्रॉनिक	8

	फण्ड ट्रांसफर, स्वचलित क्लियरिंग हाउस, स्वचलित खाता प्रविष्टि, ई-भुगतान के नए तरीके – (एम पैसा, पे-पल एवं अन्य डिजिटल मुद्रा), यूपीआई एप्लीकेशन्स, आधार आधारित भुगतान पद्धति, भीम एप्लीकेशन, ई-भुगतान में जोखिम	
4	**ई-कॉमर्स में सुरक्षा एवं कानूनी प्रावधान** ई-कॉमर्स सुरक्षा – अर्थ एवं मुद्दे, सुरक्षा चेतावनी एवं निर्देश, सुरक्षा में सेंध, हैकिंग, स्निफिंग, सायबर अपराध – धोखाधड़ी। तकनीकी समाधान, एन्क्रिप्शन, संवाद की सुरक्षा चैनल, नेटवर्क प्रोटेक्शन, सर्वर एवं ग्राहक की सुरक्षा। सूचना तकनीक अधिनियम 2000 के सुरक्षा संबंधी प्रावधान।	7
प्रायोगिक क्रियाकलाप : **विद्यार्थियों के लिए आवश्यक है कि -** 1. विभिन्न ई-कॉमर्स वेबसाइटों पर क्लिक करना और उन पर पंजीकरण एवं लॉगिन। 2. इंटरनेट बैंकिंग खाता खोलना एवं उसका संचालन 3. किसी भी ऑनलाइन वेबसाइट से उत्पाद खरीदने के लिए इंटरनेट बैंकिंग सुविधा का उपयोग 4. ई-वॉलेट, ई-पेमेंट आदि के उपयोग को सिखाने में मदद 5. विभिन्न मुद्दों पर शिकायत दर्ज करना जैसे – दोषपूर्ण उत्पाद, वितरण में देरी, रिफंड, रिटर्न आदि		30

भाग स-अनुशंसित अध्ययन संसाधन			
स.क्र.	लेखक	पुस्तक का नाम	प्रकाशक
1.	M.K.Malik	ई –कॉमर्स की अनिवार्यता	संजय साहित्य भवन आगरा
2.	एस.एल.अरोरा	सूचनार्थ प्रणाली और ईकॉमर्स-	साहित्य भवन आगरा
3.	E-commerce	Dr. Sandeep Srivastava, Er. Meera Goyal	SBPD-New Delhi

अनुशंसित डिजिटल प्लेटफॉर्म वेब लिंक:-

1.https://ncert.nic.in/textbook/pdf/khbs105.pdf

2.https://sdak24.com/unit-1-introduction-e-commerce-bcom-notes.

3. https://www.uou.ac.in/sites/default/files/slm/BCM-305.pdf

4. https://www.mcu.ac.in/wp-content/uploads/2020/04/2DCA2-Unit-I-Internet-and-E Commerce.pdf

5.SWAM PORTAL

(PROF.PAVAN MISHRA)
Chairman
Central Board of Studies (Commerce)
Department of Higher Education Govt. of M.P.

आधार पाठ्यक्रम प्रथम प्रश्नपत्र हिन्दी भाषा –

(भाग–ए)परिचय				
	कार्यक्रम : यू.जी. लेवल डिप्लोमा	कक्षा : बी.ए./बी.कॉम./बी.एससी. /बी.एच.एससी./बी.सी.ए. द्वितीय वर्ष	वर्ष–2022	सत्र 2022–23
क्रं	विषय	आधार पाठयक्रम		
1	कोर्स कोड	**X2-FCEA1T**		
2	कोर्स का शीर्षक	भाषा और संस्कृति		
3	कोर्स का प्रकार	आधार पाठयक्रम		
4	कोर्स अपेक्षित	स्नातक प्रथम वर्ष उत्तीर्ण किसी भी विषय समूह से।		
5	कोर्स अधिगम उपलब्धि (लर्निंग आउटकम) **(CLO)**	1.भारतीय ज्ञान पंम्परा से विद्यार्थियों को अवगत एवं लाभान्वित करना। 2.उत्कृष्ट साहित्यिक पाठों के अध्ययन से रुचि का विकास करना। 3. सांस्कृतिक चेतना और राष्ट्रीय भावना का विकास करना। 4. भाषा – ज्ञान । 5. सामान्य शब्दावली और विशेष शब्दावली के अध्ययन द्वारा भाषा एवं संस्कृति बोध का विकास करना। 6. विशिष्ट शब्दावली (बीज शब्द / की वडी) से परिचित करवाते हुए बोध के स्तर को विकसित करना।		
6	क्रेडिट मान	02 क्रेडिट		
7	कुल अंक	50 अंक		
8	उत्तीर्ण अंक	17 अंक		
9	समय	1 घंटा		

व्याख्यान की कुल संख्या : वर्ष में अधिकतम 15 घंटे

(भाग–बी) कोर्स सामग्री		
इकाई	विषय	व्याख्यान घंटा
I	1.समसामयिक सन्दर्भ:श्रीमद्भगवद्गीता–कर्मयोग 2.सूर्यकान्त त्रिपाठी निराला : परिचय पाठ : जागो फिर एक बार (दो) (कविता) 3. अमरकान्त : परिचय पाठ : दोपहर का भोजन (कहानी) 4. महादेवी वर्मा : परिचय पाठ : गिल्लू (रेखाचित्र)	05
II	1. हजारी प्रसाद द्विवेदी : परिचय पाठ : नाखून क्यों बढ़ते हैं (ललित निबन्ध) 2. मध्य प्रदेश की लोककलाएँ (संकलित) 3. मध्य प्रदेशकालोकसाहित्य (संकलित)	05
III	1. मुहावरे और कहावतें (भाषा) 2. समास : परिभाषा और भेद (शब्द–रचना / व्याकरण) 3. बीज शब्द (Key Words / अवधारणा मूलक शब्द) उद्योग; सभ्यता; संस्कृति; शिक्षा; सूचना–समाज।	05
सार बिंदु (की वर्ड) टैग		
सर्च करें :–		
सूर्यकान्त त्रिपाठी निराला	जागो फिर एक बार (कविता कोश)	
अमरकान्त	दोपहर का भोजन	
महादेवी वर्मा	गिल्लू (गद्य कोश)	
हजारी प्रसाद द्विवेदी	नाखून क्यों बढ़ते हैं (गद्य कोश)	
उद्योग		
सभ्यता		
संस्कृति		
शिक्षा		
सूचना–समाज		
मुहावरे और कहावतें		
समास परिभाषा और भेद (शब्द रचना / व्याकरण)		

(भाग–सी)

अनुशंसित अध्ययन संसाधन

क्र	पाठ्यपुस्तकें, संदर्भ पुस्तकें, अन्य संसाधन
1	मध्यप्रदे ा हिन्दी ग्रंथ अकादमी से प्रका ित पुस्तकें
2	सूर्यकान्त त्रिपाठी निराला : राग–विराग, संपादक डॉ. रामविलास शर्मा लोक भारती प्रकाशन, इलाहाबाद
3	अमरकान्त प्रतिनिधि कहानियों, राजकमल प्रकाशन, द्वितीय संस्करण
4	महादेवी वर्मा : मेरा परिवार, लोक भारती प्रकाशन, इलाहाबाद, उ.प्र. 1972
5	हजारी प्रसाद द्विवेदी : कल्प लता निबंध संग्रह राजकमल प्रकाशन, दरियागंज, नईदिल्ली 2007
6	डॉ. वासुदेव नंदन प्रसाद : आधुनिक हिन्दी व्याकरण और रचना, भारती भवन, ठाकुर बाडी रोड, पटना, बिहार
7	डॉ. राजेश्वर चतुर्वेदी : हिन्दी व्याकरण, उपकार प्रकाशन, आगरा, उ.प्र.
8	गेपाल भार्गव : मध्यप्रदेश कला एव संस्कृति, कल्पज प्रकाशन, नईदिल्ली 2011
9	हिन्दी ज्ञान कोश
10	अनुशंसित डिजिटल प्लेटफॉर्म वेब लिंक
	1.www.wikipidiya.org
	2.www.egyankosh.ac.in
	3.www.youtube.com
	4.https://epgp.inflibnet.ac.in
	5.hindiwi.org
	6.Kavitakosh.org
	7.https://svayam.gov.in/

भाग द - अनुशंसित मूल्यांकन विधियां:	
अनुशंसित सतत मूल्यांकन विधियां: अधिकतम अंक: 50 विश्वविद्यालयीन परीक्षा (UE) अंक: 50	
आकलन : विश्वविद्यालयीन परीक्षा: समय -02.00 घंटे	कुल अंक 50 न्यूनतम अंक 17

अध्यक्ष

आधार पाठ्यक्रम

केंद्रीय अध्ययन मण्डल भोपाल (म.प्र.)

FC-II ENGLISH PART A: Introduction				
Program: UG Level		**Class:** II Year	**Year:** 2022-23	**Session:**2022-23 onwards
Subject: Foundation Course (English)				
1	**Course Code**	X2-FCHB1T		
2	**Course Title**	English Language and Foundation		
3	**Course Type (Core Course/Elective/ Generic Elective/ Vocational**	Foundation Course		
4	**Pre-Requisite (if any)**	To study this course, a student should have the basic knowledge of the English language. This course is designed for all the students of UG Second Year under the Foundation Course category.		
5	**Course Learning Outcomes (CLO)**	Through this course the students will be able to: 1. Strengthen their grammar and vocabulary 2. Acquire and develop LSRW (Listening, Speaking, Reading and Writing) skills 3. Learn to think creatively and critically After the completion of the course, students are expected to gain competency and proficiency in English language to perform at professional and personal level as well as to face competitive examinations at State and National level.		
6	**Credit Value**	2 Credits		
7	**Total Marks**	**Max. Marks: 50**		**Min. Marks: 17**

PART B: Content of the Course		
Total No. of Lectures: 15 hours		
Unit	**Topics**	**Number of Lectures**
I	**Text Interpretation Skills:** 1.Daffodils – Wordsworth 2.Bangle Sellers – Sarojini Naidu 3.Patriotism Beyond Politics and Religion – A.P.J. Kalam 4. Letter to God – G.L. Swanteh (Translated by Donald Yates) 5. God Sees the Truth but Waits – Leo Tolstoy	10
II	**Comprehension Skills:** Multiple choice questions based on unseen passages	3
III	**Language Skills:** Use of idioms, phrases and punctuations, Mis-Spelt & Inappropriate Words and Cloze Test, Conjunctions, re-organizing jumbled sentences, Spotting the errors.	7
	Writing Skills: Advertisement and Notice-writing, Letter Writing (Formal &	5

V	**Speech Skills:** Vowel and consonant sounds, phonetic symbols Accent, Modulation and intonation	5
	Key Words: Daffodils, Wordsworth, Wandered, Bangles, Shining, Bridal,Politics, Religion, Patriotism,God, Letter, Lencho, Swanteh, Truth, Waits, Tolstoy	

PART C: Learning Resources
Textbooks, Reference Books, Other Resources
Suggested Readings and web materials: 1. Oxford English Language Reference. Compact Oxford Dictionary, Thesaurus and Word Power Guide. OUP. 2. Brush Up Your English by S T Imam. BharatiBhawan Publishers & Distributors, 2017 3. N. D. Turton and J.B. Heaton. Dictionary of Common Errors. Longman Ltd. 1998 4. SuzanaRoopa. A Practical Course in English Pronunciation. McGraw Hill Education India 5. Chris Lele.The Vocabulary Builder Workbook. Zephyros Press 6. S. P. Dhanvel. English and Soft Skills. Orient Black Swan, 2010. 7. Dr M. Farook. English for Communication, Emerald Publishers, 2015. 8. Dr Mathew Joseph. Fine-tune your English. Orient Black Swan, 2010. 9. E. Suresh Kumar, B Yadava Raju and C Muralikrishna. Skills in English. Orient Black Swan, 2013. 10. Bill Bryson. The Mother Tongue: English and How it Got it that Way. Harper Collins, 1990. **Web Sources:** www.englishclub.com https://nptel.ac.in
http://www.bbc.co.uk/learningenglish https://www.eslfast.com **https://www.myenglishpages.com**

Part D: Assessment and Evaluation (Theory)			
Max Marks: 50	**Min. Marks: 17**	**University Exam (UE)**	**Total: 50**
University Exam (U.E.). Time 2 .00 Hours			
External Assessment (UE)		**Time: 2 Hours**	
50 multiple choice / objective / true – false type questions to be asked. Each question carries 1 mark			

(Dr. R.K.S. Sengar)
Principal
Govt. S.L.P. (PG) College, Morar
Gwalior (M.P.)

(Dr. A.S. Kushwah)
Chairman BOS Jiwaji University,
Gwalior (M.P.)

Part A : Introduction			
Program: DIPLOMA	**Class: B. Sc./B. Com/B.A./B.H.Sc. II Year**	**Year:** II	**Sessions: 2022-2023**
Subject: Entrepreneurship Development			

1.	**Course code**	X2-FCAC1T	
2.	**Course Title**	**Entrepreneurship Development**	
3.	**Course Type (Core/Electric/Generic/Elective/Vocational/...)**	**Foundation**	
4.	**Pre-requisite (if any)**	-	
5.	**Course learning outcomes (CLO)**	This course introduces the students to the basics of entrepreneurship and small business management. Students gain an understanding of how to establish and manage a small business. • Helps in building the skills, framework and knowledge of entrepreneurship and new venture creation. • Helps the students in understand the importance of the planning process and learn how to develop, write and present an effective business plans for a new venture.	
6.	**Credit Value**	03	
7.	**Total Marks**	**Max Marks: 50**	**Min Marks: 17**

Part B: Content of the course
Total Lectures: 30 Hours
Topics
1. Introduction: **Entrepreneurship Development** – Concept, types and Importance of entrepreneurs and significance of entrepreneurship in economic development, Startup process • Need, Problems, Challenges and solutions- women entrepreneurship and rural entrepreneurship • **Report preparation:** Profiling of entrepreneurs after visiting Small Scale Entrepreneurs
2. Sources of Business Ideas And Tests of Feasibility: • Generation of startup ideas, Innovation vs Creativity • Significance of writing the business plan/ project proposal; Contents of business plan/ project proposal/DPR (Detail Project Report) • Project submission/ presentation and appraisal thereof by external agencies, such as financial /non-financial institutions.
3. Regulatory Institutions and Schemes: • **Role of Regulatory Institutions;** ➢ Micro, Small & Medium Enterprises, ➢ District Industries Centers ➢ Khadi and Village Industries Commission ➢ National Small Industries Corporation ➢ Small Industries Development Bank of India • Commercial banks and various Self Employment Oriented grant and schemes; • The concept, role and functions of self-help groups, business incubators, angel investors, venture capital and private equity fund in startup ideas.

Key Words: Entrepreneurship, Entrepreneurship Development, Startup, Women Entrepreneurship, Business Plan, Detail Project Report.

Part C: Learning resources
Text books, reference books and other resources
Suggested Readings: 1. Kuratko and Rao, Entrepreneurship: A South Asian Perspective, Cengage Learning. 2. Robert Hisrich, Michael Peters, Dean Shepherd, Entrepreneurship, McGraw-Hill Education 3. Desai, Vasant. Dynamics of Entrepreneurial Development andManagement. Mumbai, Himalaya Publishing House. 4. Dollinger, Mare J. Entrepreneurship: Strategies and Resources. Illinois, Irwin. 5. Holt, David H. Entrepreneurship: New Venture Creation. Prentice-Hall of India, New Delhi. 6. Plsek, Paul E. Creativity, Innovation and Quality. (Eastern Economic Edition), New Delhi: Prentice-Hall of India. ISBN-81-203-1690-8. 7. Singh, Nagendra P. Emerging Trends in Entrepreneurship Development. New Delhi: ASEED. 8. SS Khanka, Entrepreneurial Development, S. Chand & Co, Delhi. 9. K Ramachandran, Entrepreneurship Development, McGraw-Hill Education **Online or web resources:** https://www.kviconline.gov.in/ https://msme.gov.in/ http://www.slbcmadhyapradesh.in/frontmarquee/571e2722-f3ec-4b82-8591-5b4721dff44e-AtmaNirbhar%20Bharat%20Full%20Presentation_compressed.pdf T, Rama Devi (2017) retrieved fromhttps://www.worldwidejournals.com/global-journal-for-research-analysis-GJRA/special_issues_pdf/September_2017_1507115725_62.pdf

Part D: Assessment / Evaluation
Maximum marks: 50 **University Exam: 50**

खण्ड–अ			
प्रोग्राम : DIPLOMA	कक्षा– बी.एस.सी./बी.कॉम./बी.ए./ बी.एच.एस.सी. द्वितीय वर्ष	वर्ष द्वितीय	सत्र 2022–23

विषय : उद्यमिता विकास

1	विषय क्रमांक	X2-FCAC1T	
2	पाठ्यक्रम का विषय	उद्यमिता विकास	
3	पाठ्यक्रम का प्रकार (कोर/इलेक्ट्रिक/जेनेरिक/इलेक्टिव/वोकेशनल	आधार	
4	पूर्व आवश्यकता (यदि कोई हो)		
5	पाठ्यक्रम सीखने के परिणाम	यह पाठ्यक्रम छात्रों को उद्यमिता एवं लघु व्यवसाय में प्रबंध के मूल आधार से परिचय कराता है। छात्र एक लघु व्यवसाय को स्थापित करने एवं उसका प्रबंध करने की समझ का लाभ उठाते है • उद्यमिता के कौशल निर्माण, ढाँचे एवं ज्ञान के निर्माण में सहायता एवं नये उद्यम की स्थापना। • छात्रों को इसकी समझ में सहायता के साथ इसके महत्व, योजना विधि एवं सीखने की प्रक्रिया को विकसित करना, नये उद्यम को स्थापित करने की प्रभावी योजना को लिखना एवं उसका प्रस्तुतिकरण करना।	
6	क्रेडिट वेल्यू	02	
7	कुल अंक	अधिकतम अंक 50	न्यूनतम अंक : 17

खण्ड–ब – पाठ्यक्रम की विषय वस्तु
कुल व्याख्यान – 30 घण्टे
विषय
परिचय : **उद्यमिता विकास –** • संकल्पना, उद्यमियों के प्रकार और महत्व, आर्थिक विकास में उद्यमियों का योगदान,नये उद्यम स्थापना की प्रक्रिया। • आवश्यकता, समस्या, चुनौतियां और समाधानः महिला उद्यमिता एवं ग्रामीण उद्यमिता • **रिपोर्ट तैयार करना** – लघु उद्योगों का भ्रमण करने के पश्चात उसकी रिपोर्ट तैयार करना।
व्यवसाय विचारों के स्त्रोत और व्यवहार्यता का परीक्षण : • नये उद्यम स्थापित करने का विचार, नवाचार बनाम रचनात्मकता • व्यवसाय योजना लिखने का महत्व। परियोजना प्रस्तावः व्यापार योजना की सामग्री/परियोजना प्रस्ताव / डीपीआर, (विस्तृत परियोजना प्रतिवेदन) • परियोजना जमा/प्रस्तुत करना एवं बाहरी एजेन्सियों द्वारा उनका मूल्यांकन जैसे – वित्तीय और गैर वित्तीय संस्थान
नियामक संस्थाएं एवं योजनाएं :– • **नियामक संस्थाओं की भूमिका :** सूक्ष्म लघु एवं मध्यम उद्योग जिला उद्योग केन्द्र खादी और ग्रामोद्योग आयोग राष्ट्रीय लघु उद्योग निगम भारतीय लघु उद्योग विकास बैंक वाणिज्यिक बैंक और विभिन्न स्वरोजगार उन्मुख और अनुदान योजनाएं • स्टार्टअप विचारों में स्वयं सहायता समूहों, व्यापार इन्क्यूवेंटरों, दुत निवेशकों, साहस और पूंजी और निजी इक्विटी फण्ड की अवधारणा, भूमिका एवं कार्य

महत्वपूर्ण शब्दः उद्यमिता, उद्यमिता विकास, स्टार्टअप, महिला उद्यमिता, व्यवसाय योजना, विस्तृत परियोजना प्रतिवेदन।

खण्ड–स – पाठ्यक्रम की सामग्री

पाठ्य पुस्तक/ संदर्भ पुस्तक और अन्य संसाधन

Suggested Readings:

1. Kuratko and Rao, Entrepreneurship: A South Asian Perspective, Cengage Learning.
2. Robert Hisrich, Michael Peters, Dean Shepherd, Entrepreneurship, McGraw-Hill Education
3. Desai, Vasant. Dynamics of Entrepreneurial Development and Management. Mumbai, Himalaya Publishing House.
4. Dollinger, Mare J. Entrepreneurship: Strategies and Resources. Illinois, Irwin.
5. Holt, David H. Entrepreneurship: New Venture Creation. Prentice-Hall of India, New Delhi.
6. Plsek, Paul E. Creativity, Innovation and Quality. (Eastern Economic Edition), New Delhi: PrenticeHall of India. ISBN-81-203-1690-8.
7. Singh, Nagendra P. Emerging Trends in Entrepreneurship Development. New Delhi: ASEED.
8. SS Khanka, Entrepreneurial Development, S. Chand & Co, Delhi.
9. K Ramachandran, Entrepreneurship Development, McGraw-Hill Education

Online or web resources:

https://www.kviconline.gov.in/
https://msme.gov.in/
http://www.slbcmadhyapradesh.in/frontmarquee/571e2722-f3ec-4b82-8591-5b4721dff44e AtmaNirbhar%20Bharat%20Full%20Presentation_compressed.pdf
T, Rama Devi (2017) retrieved fromhttps://www.worldwidejournals.com/global-journal-for research-analysis-GJRA/special_issues_pdf/September_2017_1507115725__62.pdf

खण्ड–द आंकलन / मूल्यांकन

Maximum marks: 50
University Exam: 50

Part A Introduction				
Program: Diploma Course		Class: B.A. II Year	Year: 2022	Session:2022-2023
Subject: Women Empowerment				
1	Course Code	X2-FCAD1T		
2	Course Title	Women Empowerment		
3	Course Type (Core Course/Elective/ Generic Elective/Vocational/ ....)	Foundation Course, Second Paper		
4	Pre-requisite (if any)	This is Compulsory Question paper of the foundation course for all the students of the second year of Graduation.		
5	Course Learning outcomes (CLO)	After going through this course, students will be able to understand the following: 1. Understand the history, concept and various dimensions of women empowerment in India. 2. Will be able to understand the constitutional provisions, laws and policies related to women empowerment. 3. Get knowledge of various issues, challenges and agencies supporting women empowerment.With this, you will be able to get acquainted with the glory story of the powerful women leadership of India. 4. Present study related to women empowerment will provide employment opportunities to the students in government, private and non- government organizations.		
6	Credit Value	Theoretical -2		
7	Total Marks	Max. Marks: 50	Min. Passing Marks: 17	

Part B - Content of the Course
Total No. of Lectures-Tutorials: 30 Hourse (per week Two hours): 6 hours per week L-T-P: 2-0-0

UNIT	SUBJECT	NUMBER OF LECTURES
I	1. History of Women Empowerment in India: Ancient Period, Medieval and Modern Period. 2. Concept of Women Empowerment:	06

17.4.23

	Meaning, forms, Need and Importance. 3. Dimensions of Women Empowerment: Social, Religious, Economic, Educational and Political. Key Words: Women Empowerment, Social, Religious, Economic, Educational and Political Dimensions.	
II	1. Women Empowerment: Constitutional Provisions and Laws 2. Women Empowerment Policy and Schemes A. Central Level B. State Level (With Special Reference to Madhya Pradesh) Key Words: Constitutional Provisions, Policy, Central Schemes, State Schemes.	06
III	1. Women Empowerment: Issues and Challenges. 2. Supporting Agencies: NGOs, Self Help Groups and Panchayati Raj Institutions. 3. Powerful Women Leadership of India: Ahilya Bai Holkar, Rani Durgavati, Savitri Bai Phule, Mary Kom, Sindhutai Sakpal, Tessy Thomas, Indira Nooyi, Gaura Devi. Key Words: NGOs, Self Help Groups, Panchayati Raj, Women Leadership.	08
IV	Financial Awareness Among Women: 1. Budget: Determination of objectives, establishment of goals, action plan for achieving goals. Formulation of family budget. A realistic budget: The rule (50 percent needs, 30 percent wants, 20 percent savings). 2. Identification of expenditure on self, identification of unnecessary expenditure, method of control over expenditure. 3. Indebtedness and savings priorities Debt-Circle Trap (Moneylender / Mahajan / Private Institutional Loan/Mortgage) Possible reasons and solutions for Debt Emergency Savings Wise Investment - Sukanya Yojana, Mahila Samman Savings Certificate (Effective from 01 April 2023) Action plan to achieve "Earn, Save and Spend" Key Words: Expenditure, Realistic Budget, Indebtedness, Wise Investment	10

Part C- Recommended Study Resources

Recommended Book/ Accessories Books / Other Text Resources

1. अंसारी, एम. ए., नारी तुम क्या ?, ज्योति प्रकाशन जयपुर, 2006

2. अंजली, भारत में महिला अपराध, राधा पब्लिकेशन नई दिल्ली, 2005
3. गोयल, संगीता और गोयल, सुनीता, भारतीय समाज में नारी, आर. जी.एस.ए. पब्लिशर्स जयपुर, 2003
4. कौर हरप्रीत, महिलाओं के विरुद्ध हिंसा एवं मद्यपान, अमेजिंग पब्लिकेशन नई दिल्ली 2014
5. कश्यप, आलोक, भारतीय समाज में नारी दशा और दिशा, आर्य पब्लिकेशन नई दिल्ली, 2013
6. नईम मुहम्मद, महिला सशक्तिकरण: चुनौतियां एवं समाधान, यूनिवर्सिटी पब्लिकेशन दिल्ली, 2014
7. सिंह, निशांत, भारतीय महिलाएं एक सामाजिक अध्ययन, ओमेगा पब्लिकेशन, नई दिल्ली 2012
8. सोती, वीरेंद्र, चंद्र, भारतीय संस्कृति में स्त्रियों की स्थिति, डी. के. प्रिंटवर्ल्ड लि. नई दिल्ली, 2009
9. शाह, तृप्ति, (हिंदी) अन, सोनी, रामनरेश, स्त्री जीवन का संघर्ष: प्राचीन काल से भक्ति आंदोलन तक उन्नति विकास शिक्षण संगठन एवं सहियर (स्त्री संगठन)
10. Samiuddin, Abida, and Khanam, R., Women Socio-Economic Empowerment, Globa Vision Publishing House, Ansari Road New Delhi, 2013
11. Tripathi, Madhusoodan, Women Rights in India, Omega Publications, Ansari Road New Delhi, 2011
12. वर्मा, सांवलिया बिहार, महिला जाग्रति और सशक्तिकरण, अविष्कार पब्लिकशर्स, जयपुर 2005
13. वर्मा, सांवलिया बिहारी, ग्रामीण महिला उत्थान, यूनिवर्सिटी पब्लिकेशन दिल्ली, 2011
14. यादव, वीरेंद्र, सिंह, नई सहस्राब्दी का महिला सशक्तिकरण : अवधारणा, चिंतन एवं सरोकार ओमेगा पब्लिकेशन, अंसारी रोड नई दिल्ल, 2010

Recommended Equivalent online course :
https//nptel.ac.in.
https//swayam.gov.in/explorer
IGNOU & Other centrally/state operated Universities MOOC platforms such as "SWAYAM" in Indiaand Abroad

Part D- Recommended Assessment methods

Recommended Assessment methods
Maximum Marks :50
UNIVERSITY EXAMINATION (OBJECTIVE) MARKS : 50

Assessment : University Exams: Time : 01 Hours	Total objective type Question : 50	**50x1 = 50** **Total Marks :50**
Any Comments / Suggestions :		

भाग अ परिचय				
कार्यक्रम: डिप्लोमा पाठ्यक्रम		कक्षा: बी.ए. द्वितीय वर्ष	वर्ष: 2022	सत्र : 2022-23
विषय: महिला सशक्तिकरण				
1	पाठ्यक्रम का कोड	X2-FCAD1T		
2	पाठ्यक्रम का शीर्षक	महिला सशक्तिकरण		
3	पाठ्यक्रमकाप्रकार : (कोरकोर्स/ इलेक्टिव/ जेनेरिकइलेक्टिव/ वोकेशनल)	आधार पाठ्यक्रम, द्वितीय प्रश्न-पत्र		
4	पूर्व अपेक्षा : (यदि कोई हो)	स्नातक द्वितीय वर्ष के समस्त विद्यार्थियों के लिए आधार पाठ्यक्रम का यह अनिवार्य प्रश्न-पत्र है।		
5	पाठ्यक्रम अध्ययन के परिलब्धिया (सीएलओ)	इस पाठ्यक्रम का अध्ययन करने के पश्चात विद्यार्थी निम्नलिखित को समझने में सक्षम होंगे : 1. भारत में महिला सशक्तिकरण के इतिहास, अवधारणा और महिला सशक्तिकरण के विभिन्न आयामों को समझ सकेंगे। 2. महिला सशक्तिकरण से संबंधित संवैधानिक प्रावधान, कानून एवं नीतियों को समझ सकेंगे। 3. महिला सशक्तिकरण सम्बन्धी विभिन्न मुद्दों, चुनौतियों एवं सशक्तिकरण में सहायक अभिकरणों का ज्ञान प्राप्त कर सकेंगे इसके साथ ही भारत के शक्तिशाली महिला नेतृत्व की गौरव गाथा से परिचित हो सकेंगे। 4. महिला सशक्तिकरण सम्बन्धी प्रस्तुत अध्ययन विद्यार्थियों को शासकीय, अशासकीय एवं स्वयं सेवी संगठनों में रोजगार के अवसर उपलब्ध करायेगा।		
6	क्रेडिट मान	सैद्धांतिक - 2		
7	कुल अंक	अधिकतम अंक : 50	न्यूनतम उत्तीर्ण अंक : 17	
भाग ब : पाठ्यक्रम की विषय-वस्तु				
व्याख्यान की कुल संख्या - ट्यूटोरियल : 30 घण्टे (प्रति सप्ताह दो घंटे) L-T-P : 2-0-0				

इकाई	विषय	व्याख्यान
I	1. भारत में महिला सशक्तिकरण का इतिहास : प्राचीन काल, मध्यकाल एवं आधुनिक काल। 2. महिला सशक्तिकरण की अवधारणा : अर्थ, स्वरूप आवश्यकता एवं महत्व। 3. महिला सशक्तिकरण के आयाम : सामाजिक, धार्मिक, आर्थिक, शैक्षणिक एवं राजनीतिक। सार बिंदु : महिला सशक्तिकरण, सामाजिक, धार्मिक, आर्थिक, शैक्षणिक, राजनीतिक आयाम।	06

17.4.23

II	1. महिला सशक्तिकरण: संवैधानिक प्रावधान एवं कानून। 2. महिला सशक्तिकरण : नीति एवं योजनाएं (क) केंद्रीय स्तर (ख) राज्य स्तर (म.प्र. के विशेष संदर्भ में) सार बिंदु : संवैधानिक प्रावधान, कानून, केंद्रीय योजनाएँ, राज्य (म.प्र.)योजनाएं	06
III	1. महिला सशक्तिकरण : मुद्दे एवं चुनौतिया। 2. सहायक अभिकरण : गैर सरकारी संगठन, स्व सहायता समूह एवं पंचायती राज संस्थाएं। 3. भारत का शक्तिशाली महिला नेतृत्व : अहिल्या बाई होलकर, रानी दुर्गावती, सावित्री बाई फुले, मैरीकॉम, सिंधुताई सकपाल, टेसी थॉमस, इंदिरा नुई, गौरा देवी। सार बिंदु - गैर सरकारी संगठन, स्व-सहायता समूह, पंचायती राज संस्थाएं, भारत का शक्तिशाली महिला नेतृत्व ।	08
IV	महिलाओं में वित्तीय जागरूकता 1. बजट : उद्देश्य का निर्धारण, लक्ष्यों की स्थापना, लक्ष्यों प्राप्ति हेतु कार्य योजना। पारिवारिक बजट का निर्माण। एक यथार्थवादी बजट : नियम (50 प्रतिशत जरूरत, 30 प्रतिशत चाहत, 20 प्रतिशत बचत)। 2. स्वयं पर होने वाले व्यय की पहचान: अनावश्यक व्यय की पहचान,व्यय पर नियंत्रण की पद्धति। 3. ऋणग्रस्तता एवं बचत की प्राथमिकताएँ ऋण-चक्र जाल (साहूकार / महाजन / निजी संस्थागत ऋण /गिरवीं) ऋण के संभावित कारण एवं समाधान आपातकालीन बचत बुद्धिमान निवेश : सुकन्या योजना, महिला सम्मान बचत सर्टिफिकेट (01 अप्रैल 2023 से लागू) "कमाओं, बचत करो और खर्च करो" की प्राप्ति के लिए कार्ययोजना।	10

भाग स- अनुशंसित अध्ययन संसाधन

अनुशंसित पुस्तकें/सहायक पुस्तकें/ अन्य पाठ्य संसाधन /पाठ्य सामग्री :

1. अंसारी, एम. ए., नारी तुम क्या ?, ज्योति प्रकाशन जयपुर, 2006
2. अंजली, भारत में महिला अपराध, राधा पब्लिकेशन नई दिल्ली, 2005
3. गोयल, संगीता और गोयल, सुनीता, भारतीय समाज में नारी, आर. जी.एस.ए. पब्लिशर्स जयपुर,

17.4.23

2003

4. कौर हरप्रीत, महिलाओं के विरुद्ध हिंसा एवं मद्यपान, अमेजिंग पब्लिकेशन नई दिल्ली 2014

5. कश्यप, आलोक, भारतीय समाज में नारी दशा और दिशा, आर्य पब्लिकेशन नई दिल्ली, 2013

6. नईम मुहम्मद, महिला सशक्तिकरण: चुनौतियां एवं समाधान, यूनिवर्सिटी पब्लिकेशन दिल्ली, 2014

7. सिंह, निशांत, भारतीय महिलाएं एक सामाजिक अध्ययन, ओमेगा पब्लिकेशन, नई दिल्ली 2012

8. सोती, वीरेंद्र, चंद्र, भारतीय संस्कृति में स्त्रियों की स्थिति, डी. के. प्रिंटवर्ल्ड लि. नई दिल्ली, 2009

9. शाह, तृप्ति, (हिंदी) अन, सोनी, रामनरेश, स्त्री जीवन का संघर्ष: प्राचीन काल से भक्ति आंदोलन तक उन्नति विकास शिक्षण संगठन एवं सहियर (स्त्री संगठन)

10. Samiuddin, Abida, and Khanam, R., Women Socio-Economic Empowerment, Globa Vision Publishing House, Ansari Road New Delhi, 2013

11. Tripathi, Madhusoodan, Women Rights in India, Omega Publications, Ansari Road New Delhi, 2011

12. वर्मा, सांवलिया बिहार, महिला जाग्रति और सशक्तिकरण, अविष्कार पब्लिकशर्स, जयपुर 2005

13. वर्मा, सांवलिया बिहारी, ग्रामीण महिला उत्थान, यूनिवर्सिटी पब्लिकेशन दिल्ली, 2011

14. यादव, वीरेंद्र, सिंह, नई सहसाब्दी का महिला सशक्तिकरण : अवधारणा, चिंतन एवं सरोकार ओमेगा पब्लिकेशन, अंसारी रोड नई दिल्ल, 2010

अनुसंसित समकक्ष ऑनलाइन पाठ्यक्रम :

https://nptel.ac.in/

https://swayam.gov.in/explorer

IGNOU & Other centrally/state operated Universities MOOC platforms such as "SWAYAM" in India and Abroad

भाग द- अनुशंसित मूल्यांकन विधियां :

अनुशंसित सतत मूल्यांकन विधियां

अधिकतम अंक : 50

विश्वविद्यालय परीक्षा (वस्तुनिष्ठ) अंक : 50

आंकलन : विश्वविद्यालयीन परीक्षा समय: 01 घण्टे	कुल वस्तुनिष्ठ प्रश्न : 50	50x1 = 50 कुल अंक :50

कोई टिप्पणी सुझाव :

Part A Introduction				
Program: Degree		Class : UG	Year: III	Session: 2023-24
Subject: BCA				
1	Course Code	S3-BCAA1D		
2	Course Title	Computer Graphics (Theory) (Group A - Paper-I)		
3	Course Type (Core Course/ Discipline Specific Elective/ Elective/ Generic Elective /Vocational/.....)	Discipline Specific Elective (DSE)		
4	Pre-requisite (if any)	None		
5	Course Learning outcomes (CLO)	**On successful completion of this course, the students will be able to:** 1. Understand the basics of computer graphics, different graphics systems and applications of computer graphics. 2. Discuss various algorithms for scan conversion and filling of basic objects and their comparative analysis. 3. Use of geometric transformations on graphics objects and their application in composite form. 4. Extract scene with different clipping methods and its transformation to graphics display device. 5. Explore projections and visible surface detection techniques for display of 3D scene on 2D screen. 6. Render projected objects to naturalize the scene in 2D view and use of illumination models for this.		
6	Credit Value	4		
7	Total Marks	Max. Marks: 30 + 70	Min. Passing Marks: 35	

Part B- Content of the Course

No. of Lectures (in hours per week): 3 **Hrs. per week**
Total No. of Lectures: **60 Hrs.**

Module	Topics	No. of Lectures (1 Hour Each)
Unit-I	**Introduction to Computer Graphics:** Application of Computer Graphics, Interactive and Passive Graphics. **Graphic Systems:** Display Processor, Cathode Ray Tube (CRT), Random Scan vs Raster Scan, Color CRT Monitors, Direct View Storage Tubes, Flat Panel Display. **Input-Output Devices:** Input Devices, Trackball, Light Pen, Image Scanner, Output Devices, Plotters.	12

Dor Goswami

Unit -II	**Scan Conversion a line:** Scan Conversion Definition, Scan Converting a Point, Scan Converting a Straight Line, DDA Algorithm. **Scan Conversion Circle:** Defining a Circle, Defining a Circle using Polynomial Method, Defining a Circle using Polar Coordinates Method, Bresenham's Circle Algorithm, Midpoint Circle Algorithm. **Scan Converting Ellipse:** Scan converting a Ellipse, Polynomial Method, Trignometric Method, Midpoint Ellipse Algorithm	12
Unit - III	**Filled Area Primitives:** Boundary Fill Algorithm, Flood Fill Algorithm, Scan Line Polygon Fill Algorithm. **2D Transformations:** Introduction of Transformation, Translation, Scaling, Rotation, Reflection, Shearing, Matrix Representation, Homogeneous Coordinates, Composite Transformation, Pivot Point Rotation. **2D-Viewing:** Window, Window to Viewport Co-ordinate Transformation, Zooming, Panning.	12
Unit -IV	**Clipping Techniques:** Clipping, Point Clipping, Line Clipping, Midpoint Subdivision Algorithm, Text Clipping, Polygon, Sutherland-Hodgeman Polygon Clipping, Weiler-Atherton Polygon Clipping. **Pointing & Positioning:** Pointing & Positioning Techniques, Elastic or Rubber Band Techniques, Dragging. **Shading:** Introduction of Shading, Constant Intensity Shading, Gouraud shading, Phong Shading.	12
Unit V:	**Animation:** Animation, Application Areas of Animation, Animation Functions. **3D Computer Graphics:** Three Dimensional Graphics, Three Dimensional Transformations, Scaling, Rotation, Rotation about Arbitrary Axis, Inverse Transformations, Reflection, Shearing **Hidden Surfaces:** Hidden Surface Removal, Back Face Removal Algorithm, Z-Buffer Algorithm, Painter's Algorithm, Scan Line Algorithm, Subdivision Algorithm.	12

Keywords/Tags: Graphic Systems, Input-Output Devices, Scan Conversion, 2D Transformations, 2D-Viewing, Clipping Techniques, **Shading,** Animation, 3D Computer Graphics, Hidden Surfaces.

Part C-Learning Resources

Text Books, Reference Books, Other resources

Suggested Readings:

Textbooks:

1. Hearn: Computer Graphics C Version, Pearson Education India; 2nd edition, 2002.
2. John Hughes, Andries van Dam, Morgan McGuire, David Sklar, James Foley: Computer Graphics: Principles and Practice, Addison-Wesley Professional, 3rd edition, 2013.
3. Zhigang Xiang, Roy Plastock: Computer Graphics, McGraw Hill Education, 2nd edition, 2006.
4. मध्य प्रदेश हिन्दी ग्रंथ अकादमी की पुस्तकें।

Dr Gosmami

Reference Book:

1. James D. Foley, Andries van Dam, Steven K. Feiner, John F. Hughes: Introduction to Computer Graphics, Addison Wesley, 1993.
2. Chopra Dr. Rajiv: Computer Graphics, S Chand & Co Ltd.
3. Desai: Computer Graphics, PHI, 2008.
4. Asthana, R.G.S.: Computer Graphics for Scientists and Engineers, New Age International Pvt Ltd.

Suggested Digital Platforms Web links:

https://www.eshiksha.mp.gov.in/mpdhe
https://epgp.inflibnet.ac.in

Suggested equivalent online courses:

https://nptel.ac.in/courses/106103224
https://nptel.ac.in/courses/106106090

Suggested Continuous Evaluation Methods:

Maximum Marks : 100

Continuous Comprehensive Evaluation (CCE) : 30 Marks University Exam (UE): 70 Marks

Internal Assessment : Continuous Comprehensive Evaluation (CCE)	Class Test Assignment/Presentation	30
External Assessment : University Exam Section Time : 03.00 Hours	**Section(A)** : Very Short Questions **Section (B) :** Short Questions **Section (C) :** Long Questions	70

Any remarks/ suggestions:

Dr Goswami

Part A Introduction			
Program: Degree	Class :UG	Year: III Year	Session: 2023-24
Subject: BCA			
1	Course Code	S3-BCAA1Q	
2	Course Title	**Computer Graphics (Practical) (Group A - Paper-I)**	
3	Course Type (Core Course/ Discipline Specific Elective/ Elective/ Generic Elective /Vocational/.....)	**Discipline Specific Elective (DSE)**	
4	Pre-requisite (if any)	**None**	
5	Course Learning outcomes (CLO)	**On successful completion of this course, the students will be able to:** 1. Understand the basics of computer graphics, different graphics systems and applications of computer graphics. 2. Discuss various algorithms for scan conversion and filling of basic objects and their comparative analysis. 3. Use of geometric transformations on graphics objects and their application in composite form. 4. Extract scene with different clipping methods and its transformation to graphics display device. 5. Explore projections and visible surface detection techniques for display of 3D scene on 2D screen. 6. Render projected objects to naturalize the scene in 2D view and use of illumination models for this.	
6	Credit Value	**2**	
7	Total Marks	Max. Marks: 100	Min. Passing Marks:35
Part B- Content of the Course			

Dr Goswami

Total No. of Lectures-Tutorials-Practical (in hours per week): L-T-P: 0-0-1		
Unit	**Topics**	**No. of Lectures** (2 Hours Each)
	List of Practicals: 1. Write a Program to draw basic graphics construction like line, circle, arc, ellipse and rectangle. 2. Write a program of Translation, Rotation, and Scaling using Composite Transformation. 3. Write a program to draw a Circle using midpoint implementation Method. 4. Write a program to draw Bezier curve. 5. Program to rotate a rectangle about its midpoint. 6. Program to clip a line using Liang Barsky Method. 7. Program to implement Standard Perspective Projection in 3-Dimensions. 8. Program to implement Parallel Projection in 3-Dimensions. 9. Write a Program to implement Digital Clock. 10. Write a Program to draw animation using increasing circles filled with different colors and patterns. 11. Write a Program control a ball using arrow keys. 12. Write a Program to implement Bouncing Ball in vertical direction.	**30**

Keywords/Tags:

Part C-Learning Resources

Text Books, Reference Books, Other resources

Suggested Readings:

Textbooks:

4. Hearn: Computer Graphics C Version, Pearson Education India; 2nd edition, 2002.
5. John Hughes, Andries van Dam, Morgan McGuire, David Sklar, James Foley: Computer Graphics: Principles and Practice, Addison-Wesley Professional, 3rd edition, 2013.
6. Zhigang Xiang, Roy Plastock: Computer Graphics, McGraw Hill Education, 2nd edition, 2006.
4. मध्य प्रदेश हिन्दी ग्रंथ अकादमी की पुस्तकें।

Reference Book:

Dr Goswami

1. James D. Foley, Andries van Dam, Steven K. Feiner, John F. Hughes: Introduction to Computer Graphics, Addison Wesley, 1993.
2. Chopra Dr. Rajiv: Computer Graphics, S Chand & Co Ltd.
3. Desai: Computer Graphics, PHI, 2008.
4. Asthana, R.G.S.: Computer Graphics for Scientists and Engineers, New Age International Pvt Ltd.

Suggestive digital platforms/ web links:

https://www.eshiksha.mp.gov.in/mpdhe
https://epgp.inflibnet.ac.in

Suggested equivalent online courses:

https://nptel.ac.in/courses/106103224
https://nptel.ac.in/courses/106106090

Part D-Assessment and Evaluation

Suggested Continuous Evaluation Methods:

Internal Assessment	Marks	External Assessment	Marks
Class Interaction /Quiz	30	Viva Voce on Practical	70
Attendance		Practical Record File	
Assignments (Charts/ Model Seminar / Rural Service/ Technology Dissemination/ Report of Excursion/ Lab Visits/ Survey / Industrial visit)		Table work / Experiments	
	Total Marks : 100		

Any remarks/ suggestions:

Dr Goswami

Theory Paper

Part A Introduction				
Program: Degree		Class :UG	Year: III	Session: 2023-24
Subject: BCA				
1	Course Code	S3-BCAA2D		
2	Course Title	Python Programming (Theory) (Group A - Paper-II)		
3	Course Type (Core Course/ Discipline Specific Elective/ Elective/ Generic Elective /Vocational/.....)	Discipline Specific Elective (DSE)		
4	Pre-requisite (if any)			
5	Course Learning outcomes (CLO)	On successful completion of this course, the students will be able to: 1.Develop and execute simple Python programs. 2. Structure a Python program into functions. 3. Using Python lists, tuples to represent compound data 4. Develop Python Programs for file processing		
6	Credit Value	4		
7	Total Marks	Max. Marks: 30 + 70	Min. Passing Marks: 35	

Part B- Content of the Course

No. of Lectures (in hours per week): 3 **Hrs. per week**
Total No. of Lectures: **60 Hrs.**

Module	Topics	No. of Lectures (1 Hour Each)
Unit - I	What is Python? WHY PYTHON? History, Features - Dynamic, Interpreted, Object oriented, Embeddable, Extensible, Large standard libraries, Free and Open source. Download &Python Installation Process in Windows, Unix, Linux and Mac, Online Python IDLE, Python Realtime IDEs like Spyder, Jupyter Note Book, PyCharm, Rodeo, Visual Studio Code, ATOM, PyDevetc, Data Types and Variables, Numbers, Operators Comments in Python. Input output operation in python.	No. of Lectures 14
Unit - II	Control Statements: Conditional control statements - if, If-else, If-elif-else, Loop control statements- for, while, Data Structure & Collection:-String, List, Tuple, Set, Dictionary, Comparison of List, Tuple and Set, Function in python, types of function in python, map, reduce, filter function. Lamda Function	10

Dr Goswami

Unit - III	Importance of modular programming. What is module? Types of Modules - Pre defined, User defined. User defines module creation, OS, Date-time, math modules, organizing python project into packages, Types of packages - pre defined, user defined. Package v/s Folder, File and Directory handling in Python.	**12**
Unit - IV	Procedural v/s Object oriented programming, Principles of OOP - Encapsulation, Abstraction (Data Hiding), Polymorphism, Inheritance. Inner Classes. Exception handling and types of errors, try, except, finally, raise, and Need to Custom exceptions, Case studies, regular expression.	**12**
Unit - V	Multithreading and multiprocessing in python, Threading module, Creating thread - inheriting Thread class , Using callable object, Life cycle of thread, Single threaded application, Multithreaded application, Can we call run() directly? Need to start() method , Sleep() & Join(), Synchronization - Lock class - acquire(), release() functions. Garbage collection. Python Data Base Communications (PDBC), Introduction of Numpy, Pandas & MatPlotLib, Drawing plots.	**12**

Keywords/Tags: Open Source, Data Type, Module, List, Tuples, Directory

Part C-Learning Resources

Text Books, Reference Books, Other resources

Suggested Readings:

1.Mark Lutz, Learning Python

2. Tony Gaddis, Starting Out With Python

3. Kenneth A. Lambert, Fundamentals of Python

4. JamesPayne,BeginningPythonusingPython2.6andPython32.

5. मध्य प्रदेश हिन्दी ग्रंथ अकादमी की पुस्तकें।

Reference Books:

1. Python Crash Course: A Hands-On, Project-Based Introduction to Programming (2nd Edition) Author: Eric Matthes.
2. **The Python Language Reference Manual** (version 3.2), Guido van Rossum, and Fred L. Drake, Jr. (Editor),ISBN: 1906966141,Network Theory Ltd, 120 pages (Revised November 2006

Suggestive digital platforms/ web links:

1. www.javatpoint.com
2. www.w3school.com
3. www.python.org
4. https://www.tutorialspoint.com/python/index.htm

Suggested equivalent online courses:

S.No.	Online Course	Duration	Plate-form

Dr Goswami

01	Joy of Computing using Python https://nptel.ac.in/courses/106106182	12 Weeks	NPTEL
02	Complete Python course https://www.udemy.com/topic/python/	12 Weeks	Udemy

Part D-Assessment and Evaluation

Suggested Continuous Evaluation Methods:

Maximum Marks : 100

Continuous Comprehensive Evaluation (CCE) : 30 Marks University Exam (UE): 70 Marks

Internal Assessment : Continuous Comprehensive Evaluation (CCE)	Class Test Assignment/Presentation	30
External Assessment : University Exam Section Time : 03.00 Hours	**Section(A)** : Very Short Questions **Section (B) :** Short Questions **Section (C)** : Long Questions	70

Any remarks/ suggestions:

Practical Paper

Part A Introduction

Program: Degree	**Class : UG**	**Year: III**	**Session: 2023-24**

Subject: Computer Application

1	**Course Code**	S3-BCAA2Q	
2	**Course Title**	**Python Programming (Practical) (Group A - Paper-II)**	
3	**Course Type (Core Course/ Discipline Specific Elective/ Elective/ Generic Elective /Vocational/.....)**	**Discipline Specific Elective (DSE)**	
4	**Pre-requisite (if any)**	To study this course, a student must have basic Logical, and analytical skills.	
5	**Course Learning outcomes (CLO)**	**On successful completion of this course, the students will be able to:** 1. Develop Simple programs in Pythong 2. Knowledge of conditional and loop statements. 3. Learning of Tuple, List, Directory in Python 4. Knowledge of Files and Ooops Concepts in Pyhton. 5. Introductory Knowledge of Pandas, PDBC and Numpy.	
6	**Credit Value**	**2**	
7	**Total Marks**	Max. Marks: 100	Min. Passing Marks:35

Part B- Content of the Course

Number of Lab Practical's (in hours per week): 2 Hours Per Week

Dr Goswami

Total No. of Lab : 30 (Each Lab of 2 Hours)		
	Suggestive List of Practical **Students are required to write program(Code) in Python, execute and test it**	**No. of Labs: 30** (2 Hours Each)
	1. Write a program to demonstrate different number data types in Python. 2. Write a program to perform different Arithmetic Operations on numbers in Python. 3. Write a program to create, concatenate and print a string and accessing sub-string from a given string. 4. Write a python script to print the current date in the following format a. "Fri Oct 11 02:26:23 IST2019" 5. Write a program to create, append, and remove lists in python. 6. Write a program to demonstrate working with tuples in python. 7. Write a program to demonstrate working with dictionaries in python. 8. Write a python program to find largest of three numbers. 9. Write a Python program to construct the following pattern, using a nested for loop * * * * * * * * * * * * * * * * 10. Write a Python script that prints prime numbers less than20. 11. Write a python program to define a module to find Fibonacci Numbers and import the module to another program. 12. Write a python program to define a module and import a specific function in that module to another program. 13. Write a program that inputs a text file. The program should print all of the unique words in the file in alphabetical order.	

Dr Goswami

	14. Write a Python class to convert an integer to a roman numeral. 15. Write a Python class to reverse a string word by word.	

Keywords/Tags: Open Source, Data Type, Module, List, Tuples, Directory, Lops, Array

Part C-Learning Resources

Text Books, Reference Books, Other resources

Suggested Readings:

1.Mark Lutz, Learning Python
2. Tony Gaddis, Starting Out With Python
3. Kenneth A. Lambert, Fundamentals of Python
4. JamesPayne,BeginningPythonusingPython2.6andPython32.
5. मध्य प्रदेश हिन्दी ग्रंथ अकादमी की पुस्तकें।

Suggestive digital platforms/ web links:

1. www.javatpoint.com
2. www.w3school.com
3. www.python.org
4. https://www.tutorialspoint.com/python/index.htm

Suggested equivalent online courses:

S.No.	Online Course	Duration	Plate-form
01	Joy of Computing using Python https://nptel.ac.in/courses/106106182	12 Weeks	NPTEL
02	Complete Python course https://www.udemy.com/topic/python/	12 Weeks	Udemy

Part D-Assessment and Evaluation

Suggested Continuous Evaluation Methods:

Internal Assessment	Marks	External Assessment	Marks
Class Interaction /Quiz	30	Viva Voce on Practical	70
Attendance		Practical Record File	
Assignments (Charts/ Model Seminar / Rural Service/ Technology Dissemination/ Report of Excursion/ Lab Visits/ Survey / Industrial visit)		Table work / Experiments	
	Total Marks : 100		

Any remarks/ suggestions:

Dr Goswami

Dor Goswami

Theory Paper

Part A Introduction				
Program: Degree		Class : UG	Year: III	Session: 2023-24
Subject: BCA				
1	Course Code	S3-BCAB2T		
2	Course Title	Cloud Computing		
3	Course Type (Core Course/ Discipline Specific Elective/Elective/Generic Elective/Vocational/.....)	MINOR		
4	Pre-requisite (if any)			
5	Course Learning outcomes (CLO)	On successful completion of this course, the students will be able to: 1. Learn fundamentals of cloud computing 2. Understand cloud architecture, types and services. 3. Apply concepts of cloud computing in real applications 4. Gain deep insight of security in cloud computing 5. Have knowledge of market Based management of Clouds		
6	Credit Value	6		
7	Total Marks	Max. Marks: 30 + 70	Min. Passing Marks:35	

Part B- Content of the Course

Total No. of Lectures- 90 Tutorials-Practical (in hours per week):4-0-0
L-T-P:

Unit	Topics	No. of Lectures (1 Hour Each)
I	Cloud Computing Fundamental: Cloud Computing definition, private, public and hybrid cloud. Cloud types; IaaS, PaaS, SaaS. Benefits and challenges of cloud computing, public vs private clouds	18
II	Basics Of Service Management in Cloud Computing, Data Management in Cloud Computing. Cloud Computing Architecture: Cloud Reference Model, Layer and Types of Clouds, Architectural design of Compute and Storage Clouds	18
III	Overview Of cloud management &Virtualization: Fundamental concepts of compute ,storage, networking, desktop and application virtualization,role of virtualization in enabling the cloud Virtualization benefits, server virtualization, Block and file level storage virtualization	18
IV	Cloud Security: Cloud Information security fundamentals, Cloud security services, Design principles, Secure Cloud Software Requirements, Policy Implementation, Cloud Computing Security Challenges,	18

Dr Goswami

	Virtualization security Management, Cloud Computing Security Architecture	
V	Market Based Management of Clouds , Federated Clouds/Inter Cloud: Characterization & Definition ,Cloud Federation Stack , Third Party Cloud Services . Case study : Google App Engine, Microsoft Azure , Hadoop , Amazon , Aneka	**18**

Keywords/Tags:

Part C-Learning Resources

Text Books, Reference Books, Other resources

Suggested Readings:

1. A. Srinivasan, J.Suresh, Cloud Computing – A Practical approach for learning and implementation, Pearson India, [ISBN-978131776513]
2. GautamShroff, Enterprise Cloud Computing Technology Architecture Applications [ISBN: 978-0521137355]
3. Kumar Saurabh "Cloud Computing – insights in to New-Era Infrastructure", Wiley India,2011
4. Dimitris N. Chorafas, Cloud Computing Strategies [ISBN: 1439834539]
5. Buyya, Selvi , Mastering Cloud Computing ,TMH Pub
6. Krutz , Vnes, Cloud Security , Wiley Pub
7. मध्य प्रदेश हिन्दी ग्रंथ अकादमी की पुस्तकें।

2. Suggestive digital platforms/ web links

1. https://onlinecourses.nptel.ac.in/noc22_cs20/preview
2. https://nptel.ac.in/courses/106105223
3. https://nptel.ac.in/courses/106104182
4. https://www.tutorialspoint.com/cloud_computing/index.htm
5. https://www.classcentral.com/course/swayam-cloud-computing-10027

Suggested equivalent online courses:

1. https://www.mygreatlearning.com/cloud_iot/certification
2. https://www.intellipaat.com/cloud-computing/certification
3. https://www.edureka.co/
4. https://www.coursera.org/browse/information-technology/cloud-computing

Part D-Assessment and Evaluation

Suggested Continuous Evaluation Methods:

Maximum Marks : 100

Continuous Comprehensive Evaluation (CCE) : 30 Marks University Exam (UE):70 Marks

Internal Assessment : Continuous Comprehensive Evaluation (CCE)	Class Test Assignment/Presentation	30

Dr Goswami

External Assessment : University Exam Section Time : 03.00 Hours	**Section(A)** : Very Short Questions **Section (B) :** Short Questions **Section (C) :**Long Questions	70
Any remarks/ suggestions:		

Dr. Gosmami

Theory Paper

Part A Introduction				
Program: Degree		Class :	Year: III	Session: 2023-24
Subject: BCA				
1	Course Code	S3-BCAC4G		
2	Course Title	MYSQL (Theory)		
3	Course Type (Core Course/ Discipline Specific Elective/Elective/Generic Elective/Vocational/.....)	Elective		
4	Pre-requisite (if any)			
5	Course Learning outcomes (CLO)	**On successful completion of this course, the students will be able to:** 1. Understand basic concepts of how a database stores information. 2. Gain knowledge Of SQL syntax with MySQL. 3. Design database for an organization and apply various SQL Queries and constructs. 4. Apply queries to retrieve and manipulate data from one or more tables. 5. Learn how to filter data based upon multiple conditions		
6	Credit Value	Theory 4		
7	Total Marks	Max. Marks: 30 + 70	Min. Passing Marks:35	

Part B- Content of the Course

Total No. of Lectures =60 (3 hours/ lecture per week)

Unit	Topics	No. of Lectures (1 Hour Each)
I	Introduction to Database and related terms, Introduction to MySQL, need Of SQL, features, Data Types, Types of SQL statements, Concept Of Keys, Null values and Not Null Values.	12
II	**Handling database with MySQL Using Query:** Create ,Save edit execute Query for different SQL Statements ,Use the Where clause, Conditional statements, Multiple conditions, Comparison Operators , Logic Values, Null Values, Wildcard characters, Compare Column Values, Distinct Values, Top Values	12
III	**Data Wrangling** : Group Data, Filtering Grouped Data Summarize Group DataPivot and Unpivot Operators Importing and Exporting Data,Update Data.	12
IV	**Joins:** Inner Join,Left Join,Full Outer Join, Self-Join, Unions,Except and Intersect, Saving the Query Results and Exporting, Generating Reports	12
V	**MySQL Functions**: Date Functions, Date Calculations	12

Dr Goswami

	Aggregate Functions, String Functions ,Sort Data ,Rank Data ,Views in Mysql , Overview Of Transactions Triggers, Stored Procedures and User Defined Functions.	

Keywords/Tags:

Part C-Learning Resources

Text Books, Reference Books, Other resources

Suggested Readings:

1. "MySQL Workbench: Data Modeling & Development" by Michael McLaughlin
2. "MySQL Stored Procedure Programming: Building High-Performance Web Applications in MySQL" by Guy Harrison and Steven Feuerstein
3. "MySQL Administrator's Bible" by Sheeri K Cabral and Keith Murphy
4. "MySQL Cookbook: Solutions for Database Developers and Administrators" by Paul DuBois
5. "MySQL Database Design and Tuning" by Robert D Schneider
6. MySQL: The Complete Reference Vikram Vaswani
7. मध्य प्रदेश हिन्दी ग्रंथ अकादमी की पुस्तकें।

Suggestive digital platforms/ web links

1. https://www.tutorialspoint.com/mysql/index.htm
2. https://www.javatpoint.com/mysql-tutorial
3. https://www.w3schools.com/MySQL/default.asp
4. https://www.mysqltutorial.org/

Suggested equivalent online courses:

1. https://onlinecourses.nptel.ac.in/noc21_cs04/preview
2. https://onlinecourses.swayam2.ac.in/aic20_sp32/preview
3. https://in.coursera.org/courses?query=mysql
4. https://www.mygreatlearning.com/academy/learn-for-free/courses/my-sql-basics
5. https://www.simplilearn.com/official/site

Part D-Assessment and Evaluation

Suggested Continuous Evaluation Methods:

Maximum Marks : 100

Continuous Comprehensive Evaluation (CCE) : 30 Marks University Exam (UE):70 Marks

Internal Assessment : Continuous Comprehensive Evaluation (CCE)	Class Test Assignment/Presentation	30
External Assessment : University Exam Section Time : 03.00 Hours	**Section(A)** : Very Short Questions **Section (B) :** Short Questions **Section (C) :**Long Questions	70

Any remarks/ suggestions:

Dr Goswami

Practical Paper

Part A Introduction				
Program: Degree		Class :	Year: III	Session: 2023-24
Subject: BCA				
1	Course Code	S3-BCAC4R		
2	Course Title	MYSQL (Practical)		
3	Course Type (Core Course/ Discipline Specific Elective/Elective/Generic Elective/Vocational/.....)	Elective		
4	Pre-requisite (if any)			
5	Course Learning outcomes (CLO)	**On successful completion of this course, the students will be able to:** 1. Understand basic concepts of how a database store information. 2. Gain knowledge Of SQL syntax with MySQL. 3. Design database for an organization and apply various SQL Queries and constructs. 4. Apply queries to retrieve and manipulate data from one or more tables. 5. Learn how to filter data based upon multiple conditions		
6	Credit Value	2		
7	Total Marks	Max. Marks: 100	Min. Passing Marks:35	

Part B- Content of the Course MYSQL (Practical)	
Total No. of Practical =30 (each of 2 hours duration (1 Practical per week))	
Practical will be conducted based on the theory Syllabus	
List of Practical	
1.	Create multiple Tables to design a database in MYSQL.
2.	Insert Data into tables using Queries
3.	Update table in MYSQL
4.	Apply Delete and truncate query on table.
5.	Alter schema using MYSQL
6.	Display records using different form of select statement.
7.	Apply aggregate functions on tables.
8.	Implement various constraints on database tables.
9.	Import and export data in MYSQL
10.	Create views using queries in MYSQL
11.	Apply Group operations on tables.
12.	Sort data in tables using query.
13.	Implement various string functions on Tables
14.	Apply different types of join operations on tables

Dr Goswami

15.	Generate report in MySQL

Keywords/Tags:

Part C-Learning Resources

Text Books, Reference Books, Other resources

Suggested Readings:

1. "MySQL Workbench: Data Modeling & Development" by Michael McLaughlin
2. "MySQL Stored Procedure Programming: Building High-Performance Web Applications in MySQL" by Guy Harrison and Steven Feuerstein
3. "MySQL Administrator's Bible" by Sheeri K Cabral and Keith Murphy
4. "MySQL Cookbook: Solutions for Database Developers and Administrators" by Paul DuBois
5. "MySQL Database Design and Tuning" by Robert D Schneider
6. MySQL: The Complete Reference Vikram Vaswani
8. मध्य प्रदेश हिन्दी ग्रंथ अकादमी की पुस्तकें।

Suggestive digital platforms/ web links

1. https://www.tutorialspoint.com/mysql/index.htm
2. https://www.javatpoint.com/mysql-tutorial
3. https://www.w3schools.com/MySQL/default.asp
4. https://www.mysqltutorial.org/

Suggested equivalent online courses:

1. https://onlinecourses.nptel.ac.in/noc21_cs04/preview
2. https://onlinecourses.swayam2.ac.in/aic20_sp32/preview
3. https://in.coursera.org/courses?query=mysql
4. https://www.mygreatlearning.com/academy/learn-for-free/courses/my-sql-basics
5. https://www.simplilearn.com/official/site

Part D-Assessment and Evaluation

Suggested Continuous Evaluation Methods:

Internal Assessment	Marks	External Assessment	Marks
Class Interaction /Quiz	30	Viva Voce on Practical	70
Attendance		Practical Record File	
Assignments (Charts/ Model Seminar / Rural Service/ Technology Dissemination/ Report of Excursion/ Lab Visits/ Survey / Industrial visit)		Table work / Experiments	
	Total Marks : 100		

Any remarks/ suggestions:

Dr. Goswami

Part A Introduction			
Program: Degree Course		**Level** –IIIrd Year	**Session: 2023-24**
Course Code	V3- COM – DIGT		
Course Title	**CYBER CRIMES AND LAWS**		
Course Type	**Vocational**		
Pre-requisite (if any)	**No**		
Course Learning outcomes (CLO)	**After completion of course, students will be able to:** 1. Identify cyber risk associated with online activities 2. Prepare them for safe working in the vertical having varied access points, data sources, network and system related issues, especially in online transactions. 3. Generate and preserve electronic evidences for personal and professional use. 4. Work in virtual space safely and with business process or products confirming to the regulatory framework and not falling under the ambit of cybercrimes. 5. Analyze the cases and find pertinent facts for resolutions.		
Expected Job Role / career opportunities	Legal Advisor, Cyber Security Administration & Regulatory Compliance Analyst, Vice President - Senior Security Manager, Cyber Security Consultant, RA - CSR - Cyber - DP - Manager, Senior Compliance Specialist, Cyber Lawyer or Cyber Law Specialist, Cyber Assistant, Internal Consultant		
Credit Value	**2 (Theory) + 2 (Practical) = 04**		

Part B- Content of the Course

Total No. of Lectures + Practical (in hours per week): **L-1 Hr / P-1 Lab Hr (=2 Hrs)**

Total No. of Lectures/ Practical: **L-30 /P-30 (60 Hrs)**

Module	Topics	No. of lectures (Total 30)
I	Introduction to Cyber World Introduction to Cyber World, Cyber Security V/s Cyber Law, Types of Cyber Threats, Difference between Cyber Crimes and Conventional Crimes, Areas Comes under Cyber Law, Jurisdiction area of cyber law. Type of Cyber Crimes like – Piracy, Phishing, Hacking of information, Data Breach, CSS Attacks, Cyber Harassments, SQL Injection, Identity Hack, Cyber terrorism, DOS, Insider Attacks, Dark Web using TOR, Credit Card/Debit Card/UPI Hackings, Cyber Stalking, Cyber bullying, Eaves dropping attack,	**10**

	online libel/slander, Social Engineering, Cryptojacking, Virtual Currency Fraud, Vishing (Voice phising), IOT Attacks, Phone Hacking, Child Pornography, Human Trafficking, Malicious Advertisement Campaign(Malvertising), online gambling, Hacking into voting systems, Breach of IPR, patent & Copyright etc	
II	Definitions under IT Act, 2000; Concept of Internet, Web Centric Business, E Business , Electronic Governance, Cyber jurisdiction. Contemporary Business Issues in Cyber Space. Security risks: Instant messaging platform, social networking sites, mobile applications and Internet of Things (IOT). Domain name dispute and their resolution, E-forms; EMoney, regulations of PPI (Pre-Payment Instruments) by RBI, Electronic Money Transfer, Privacy of Data and Secure Ways of Operation in Cyber Space.	**8**
III	Electronic Records Authentication of Electronic Records; Legal Recognition of Electronic Records; Legal Recognition of Digital Signatures; Applications and usage of electronic records and Digital Signatures in Government and its Agencies; Retention of Electronic Records, Intermediaries and their liabilities; Attribution, Acknowledgement and Dispatch of Electronic Records; Secure Electronic Records and Digital Signatures.	**6**
IV	Regulatory Framework Regulation of Certifying Authorities; Appointment and Functions of Controller; License to issue Digital Signatures Certificate; Renewal of License; Controller's Powers; Procedure to be Followed by Certifying Authority; Issue, Suspension and Revocation of Digital Signatures Certificate, Duties of Subscribers; Penalties and Adjudication; Appellate Tribunal; Offences; Overview of GDPR and Indian data protection regime	**6**
	Practical	**No. of lectures**
	1. Social Media Identity Hack Demo 2. Domain Name Registration 3. Testing Franchise News 4. Using the CEIR.gov.in Portal 5. Using the cybercrime.gov.in portal 6. Discuss Case Study on Financial Cyber Fraud 7. Discuss the case study on the use of IT Act 2000	**30**
Project/ Field trip:		

Part C-Learning Resources

Text Books, Reference Books, Other resources

1. Cyber Crimes and Laws,Dr. U.S. Pandey,Dr. Verinder Kumar,Himalaya Pub. House New delhi.
2. Arora, Sushma. and Arora R. Cyber crimes and laws, Taxmann Pvt Ltd, New Delhi.
3. Brian, Craig. Cyber Law: The Law of the Internet and Information Technology. Pearson Education.
4. Rattan J, Cyber Crime and Information Technology, Bharat Law House, Pvt Ltd.
5. Sharma J. P., and Kanojia, S. (2018).E Business and Cyber Laws. Bharat Law house Pvt Ltd.
6. Rajanikant Verma Amarjeet, Cyber Crimes & Laws, Bharti Publications, New Delhi.
7. Pavan Duggal ,Cyber Laws, Lexis Nexis Publication

Suggested equivalent online courses: e-reading:

https://swayam.gov.in

https://onedatai.com/cyber-crime-in-hindi/

https://testbook.com/ias-preparation/cybercrime?language=hindi

https://www.studocu.com/in/document/maharshi-dayanand-university/ballb/cyber-law-notes-1-help/44665606

https://www.bbau.ac.in/dept/Law/TM/1.pdf

https://www.youtube.com/watch?v=9NpHkB8Svys

https://lawbhoomi.com/ip-issues-and-cyber-law/

https://mdu.ac.in/UpFiles/UpPdfFiles/2021/Jun/4_06-11-2021_14-5443_Computer%20Applications%20in%20Business.pdf

(PROF.PAVAN MISHRA)

Chairman

Central Board of Studies (Commerce)

Department of Higher Education Govt. of M.P.

भाग अ - परिचय		
कार्यक्रम: डिग्री कोर्स	तृतीय वर्ष	सत्र:2023-24

पाठ्यक्रम का कोड	V3-COM-DIGT
पाठ्यक्रम का शीर्षक	साइबर अपराध और कानून
पाठ्यक्रम का प्रकार :	व्यावसायिक
पूर्वापेक्षा **(Prerequisite)**	नहीं
पाठ्यक्रम अध्ययन की परिलब्धियां (कोर्स लर्निंग आउटकम) (**CLO**)	पाठ्यक्रम पूरा होने के बाद, छात्र इसमें सक्षम होंगे: **1.** ऑनलाइन गतिविधियों से जुड़े साइबर जोखिम को पहचाना । **2.** उन्हें विभिन्न पहुंच बिंदुओं, डेटा स्रोतों, नेटवर्क और सिस्टम से संबंधित मुद्दों, विशेष रूप से ऑनलाइन लेनदेन में सुरक्षित काम करने के लिए तैयार करना । **3.** व्यक्तिगत और व्यावसायिक उपयोग के लिए इलेक्ट्रॉनिक साक्ष्य तैयार करें और संरक्षित करना । **4.** वर्चुअल स्पेस में सुरक्षित रूप से और नियामक ढांचे की पुष्टि करने वाली व्यावसायिक प्रक्रिया या उत्पादों के साथ काम करना,और साइबर अपराधों के दायरों को समझना । **5.** मामलों का विश्लेषण करें और समाधान के लिए प्रासंगिक तथ्य खोजना ।
अपेक्षित रोजगार / करियर के अवसर	कानूनी सलाहकार, साइबर सुरक्षा प्रशासन एवं विनियामक अनुपालन विश्लेषक, उपाध्यक्ष - वरिष्ठ सुरक्षा प्रबंधक,साइबर सुरक्षा सलाहकार,आरए- सीएसआर- साइबर-डीपी- प्रबंधक,वरिष्ठ अनुपालन विशेषज्ञ,साइबर वकील या साइबर कानून विशेषज्ञ,साइबर सहायक,आंतरिक सलाहकार
क्रेडिट मान	2 (Theory) + 2 (Practical) = 4

भाग ब- पाठ्यक्रम की विषयवस्तु		
व्याख्यानों की कुल संख्या + प्रैक्टिकल (प्रति सप्ताह घंटों में): व्याख्यान -**2** घंटे / प्रैक्टिकल अवधि -**2** घंटे		
व्याख्यान/प्रैक्टिकल की कुल संख्या : **L-30hrs/P-30hrs**		
मॉड्यूल	विषय	घंटे

I	साइबर वर्ल्ड का परिचय साइबर दुनिया का परिचय, साइबर सुरक्षा बनाम साइबर कानून, साइबर खतरों के प्रकार, साइबर अपराध और पारंपरिक अपराधों के बीच अंतर, साइबर कानून के अंतर्गत आने वाले क्षेत्र, साइबर कानून के क्षेत्राधिकार । साइबर अपराध के प्रकार जैसे - पायरेसी, फ़िशिंग, सूचना की हैकिंग, डेटा ब्रीच, सीएसएस अटैक, साइबर उत्पीड़न, एसक्यूएल इंजेक्शन, आइडेंटिटी हैक, साइबर आतंकवाद, **DOS**, इनसाइडर अटैक, **TOR** का उपयोग करके डार्क वेब, क्रेडिट कार्ड/डेबिट कार्ड/यूपीआई हैकिंग , साइबर स्टाकिंग, साइबर बुलिंग, इव्स ड्रापिंग अटैक, ऑनलाइन परिवाद/बदनामी, सोशल इंजीनियरिंग, क्रिप्टोजैकिंग, वर्चुअल करेंसी फ्रॉड, विशिंग (वॉयस फिशिंग), आईओटी अटैक, फोन हैकिंग, चाइल्ड पोर्नोग्राफी, ह्यूमन ट्रैफिकिंग, दुर्भावनापूर्ण विज्ञापन अभियान (मैलवर्टाइजिंग), ऑनलाइन जुआ, वोटिंग सिस्टम में हैकिंग, आईपीआर का उल्लंघन, पेटेंट और कॉपीराइट आदि।	**10**
II	आईटी अधिनियम, 2000 के तहत परिभाषाएँ; इंटरनेट की अवधारणा, वेब सेंट्रिक बिजनेस, ई बिजनेस, इलेक्ट्रॉनिक गवर्नेंस, साइबर क्षेत्राधिकार। साइबर स्पेस में समसामयिक व्यावसायिक मुद्दे।सुरक्षा जोखिम: इंस्टेंट मैसेजिंग प्लेटफॉर्म, सोशल नेटवर्किंग साइट्स, मोबाइल एप्लिकेशन और इंटरनेट ऑफ थिंग्स (आईओटी)। डोमेन नाम विवाद और उनका समाधान, ई-फॉर्म; ईमनी, आरबीआई द्वारा पीपीआई (प्री-पेमेंट इंस्ट्रूमेंट्स) के नियम, इलेक्ट्रॉनिक मनी ट्रांसफर, डेटा की गोपनीयता और साइबर स्पेस में संचालन के सुरक्षित तरीके।	8
III	इलेक्ट्रॉनिकरिकार्ड; इलेक्ट्रॉनिकरिकॉर्डकाप्रमाणीकरण; इलेक्ट्रॉनिकरिकॉर्डकीकानूनीमान्यता; डिजिटलहस्ताक्षरोंकीकानूनीमान्यता; सरकारऔरइसकीएजेंसियोंमेंइलेक्ट्रॉनिकरिकॉर्डऔरडिजिटलहस्ताक्षरकेअनुप्रयोगऔरउपयोग; इलेक्ट्रॉनिकरिकॉर्ड, मध्यस्थोंऔरउनकीदेनदारियोंकाप्रतिधारण; इलेक्ट्रॉनिकरिकॉर्डकाश्रेय, अभिस्वीकृतिऔरप्रेषण; सुरक्षितइलेक्ट्रॉनिकरिकॉर्डऔरडिजिटलहस्ताक्षर।	6
IV	नियामक ढांचा; प्रमाणन प्राधिकारियों का विनियमन; नियंत्रक की नियुक्ति एवं कार्य; डिजिटल हस्ताक्षर प्रमाणपत्र जारी करने का लाइसेंस; लाइसेंस का नवीनीकरण; नियंत्रक की शक्तियाँ; प्रमाणन प्राधिकारी द्वारा पालन की जाने वाली प्रक्रिया; डिजिटल हस्ताक्षर प्रमाणपत्र जारी करना, निलंबित करना और रद्द करना, ग्राहकों के कर्तव्य; दंड और न्यायनिर्णयन; अपीलीय न्यायाधिकरण; अपराध; जीडीपीआर और भारतीय डेटा सुरक्षा व्यवस्था की समीक्षा।	6
	प्रायोगिक पाठ्यक्रम	30

	1. सोशल मीडिया आइडेंटिटी हैक डेमो 2. डोमेन नाम पंजीकरण 3. फेक न्यूज का परीक्षण 4. **CEIR.gov.in** पोर्टल का उपयोग करना 5. **Cybercrime.gov.in** पोर्टल का उपयोग करना 6. वित्तीय साइबर धोखाधड़ी पर केस स्टडी पर चर्चा करें 7. आईटी अधिनियम **2000** के उपयोग पर केस स्टडी पर चर्चा करें	

Project :

भाग स- अनुशंसित अध्ययन संसाधन

पाठ्य पुस्तकें, संदर्भ पुस्तकें, अन्य संसाधन

1. डॉ.जयप्रकाश मिश्र ,सायबर विधि ,सेन्ट्रल लॉ पब्लिकेशन्स,नई दिल्ली
2. अरुण कुमार पाठकCyber Crime And Cyber Laws (Hindi),पुस्तक सदन प्रकाशन
3. Cyber Crimes and Laws, Dr. U.S. Pandey, Dr.Verinder Kumar, Himalaya Pub. House New delhi.
4. Arora, Sushma. and Arora R. Cyber crimes and laws, Taxmann Pvt Ltd, New Delhi.
5. Brian, Craig. Cyber Law: The Law of the Internet and Information Technology. Pearson Edu.
6. Rattan J, Cyber Crime and Information Technology, Bharat Law House, Pvt Ltd.
7. Sharma J. P., and Kanojia, S. (2018).E Business and Cyber Laws. Bharat Law house Pvt Ltd.
8. Rajanikant Verma Amarjeet,Cyber Crimes &Laws,BhartiPublications,New Delhi.

अनुशंसितडिजिटलप्लेटफॉर्मवेबलिंक

https://swayam.gov.in
https://onedatai.com/cyber-crime-in-hindi/
https://testbook.com/ias-preparation/cybercrime?language=hindi
https://www.studocu.com/in/document/maharshi-dayanand-university/ballb/cyber-law-notes-1-help/44665606
https://www.bbau.ac.in/dept/Law/TM/1.pdf
https://www.youtube.com/watch?v=9NpHkB8Svys
https://lawbhoomi.com/ip-issues-and-cyber-law/

(PROF.PAVAN MISHRA)
CHAIRMAN
Central Board of Studies (Commerce)
Department of Higher Education Govt. of M.P.

आधार पाठ्यक्रम: प्रथम प्रश्न पत्र - हिंदी भाषा

(भाग - अ) परिचय				
	कार्यक्रम: यूजी लेवल डिग्री	कक्षा: बी.ए./ बी.कॉम./ बी.एससी./.बी.एच,एससी./बी.सी.ए. तृतीय वर्ष	वर्ष 2023	सत्र 2023-24
क्रमांक	विषय	आधार पाठ्यक्रम		
1	कोर्स कोड	X3- FCEA1T		
2	कोर्स का शीर्षक	भाषा और संस्कृति		
3	कोर्स का प्रकार	आधार पाठ्यक्रम		
4	कोर्स अपेक्षित	स्नातक द्वितीय वर्ष उत्तीर्ण किसी भी विषय समूह से		
5	कोर्स अधिगम उपलब्धि (लर्निंग आउटकम) **(CLO)**	1 इस पाठ्यक्रम के अध्ययन से विद्यार्थी हिंदी के प्रसिद्ध रचनाकार एवं उनकी रचनाओं से परिचित हो सकेंगे। 2 पठित रचनाओं के माध्यम से विद्यार्थी देश की सभ्यता एवं संस्कृति से परिचित हो सकेंगे। 3 पाठ्यक्रम के अध्ययन से विद्यार्थियों के व्यक्तित्व का बहुमुखी विकास होगा एवं रोजगार के अवसर उपलब्ध होंगे। 4 विशिष्ट शब्दावली (बीज शब्द / की वर्ड) से परिचित करवाते हुए बोध के स्तर को विकसित करना।		
6	क्रेडिट मान	02 क्रेडिट		
7	कुल अंक	50 अंक		
8	उत्तीर्ण अंक	17अंक		
9	समय	2 घंटा		

(भाग - ब) पाठ्यक्रम सामग्री

व्याख्यान की कुल संख्या : वर्ष में अधिकतम 15 घण्टे		
इकाई	**विषय**	**व्याख्यान घण्टा**
I	1 भवानी प्रसाद मिश्र : परिचय पाठ : सतपुड़ा के जंगल 2 उषा प्रियंवदा : परिचय पाठ : वापसी 3 विवेकानन्द : पाठ : शिकागो व्याख्यान	05
II	1 विद्यानिवास मिश्र : परिचय पाठ : आँगन का पंछी 2 महात्मा गाँधी : पाठ : आत्मकथा के अंश 3 विश्व के प्रमुख धर्म।	05
III	1 वाक्य रचना एवं अशुद्धि शोधन। 2 अनुवाद : अर्थ एवं प्रकार। 3 बीज शब्द (की वर्ड / अवधारणा मूलक शब्द) लोकतन्त्र, समरसता, कला, साहित्य, अध्यात्म	05

(भाग - स)

अनुशंसित अध्ययन संसाधन

	पाठ्यपुस्तकें, सन्दर्भ पुस्तकें, अन्य संसाधन
1	महात्मा गाँधी: सत्य के साथ मेरे प्रयोग, प्रभात प्रकाशन, नई दिल्ली
2	विश्व के प्रमुख धर्म : जी. आर. सिंह
3	वासुदेव नन्दन प्रसाद : आधुनिक हिन्दी व्याकरण और रचना, भारती भवन, पटना, बिहार
4	हिन्दी ज्ञान कोष
5	उषा प्रियंवदा : वापसी
6	अनुशंसित डिजिटल प्लेटफार्म / वेब लिंक अनुशंसित समकक्ष ऑनलाईन पाठयक्रम 1 book.google.com>books 2 http://kavitakosh.org>भवानीप्रसाद मिश्र 3 भवानीप्रसाद मिश्र- Wikipedia 4 http://m.youtuve.com>watch 5 http://nibandhbharti.com>vidya-nivas-mishar 6 http://onlinefreenotes.com>वापसी 7 http://hi.m.wikipedia>wiki>उषा-प्रियंबदा 8 http://swayam.gov.in/

(भाग - द)

अनुशंसित मूल्यांकन पद्धति

	पाठ्यपुस्तकें, सन्दर्भ पुस्तकें, अन्य संसाधन
1	सतत् समग्र मूल्यांकन (CCE) नहीं होगा।
2	परीक्षा - ओ.एम.आर. शीट माध्यम से होगी।

अध्यक्ष
आधार पाठयक्रम
केन्द्रीय अध्ययन मण्डल भोपाल (म.प्र.)

FC-III ENGLISH

PART A: Introduction

Program: UG Level (Degree)	Class: III Year	Year: 2023-24	Session: 2023-24 onwards

Subject: Foundation Course (English)

1.	**Course Code**	X3-FCHB1T	
2.	**Course Title**	English Language and Communication Skills	
3.	**Course Type (Core Course/Elective/Generic Elective/ Vocational**	Foundation Course	
4.	**Pre-Requisite (if any)**	To study this course, a student should have basic knowledge of English language. This course will be studied by all the students of UG Final year under the Foundation Course category.	
5.	**Course Learning Outcomes (CLO)**	Through this course the students will be able to: 1. prepare for various competitive exams by developing their competence in English language. 2. promote their comprehension and communicative skills by being exposed to a variety of texts and their interpretations. 3. build and enhance their language competence through regular practice. 4. develop their knowledge of English Grammar and usages in a practical manner. 5. compete in national and state level examinations for various competitions after the completion of the course. 6. seek a good job and to settle down in self-employment or their own business or profession.	
6.	**Credit Value**	2 Credit	
7.	**Total Marks**	**Max. Marks : 50**	**Min. Pass Marks: 17**

PART B: Content of the Course		
Total No. of Lectures-Tutorials-Practical (in hours – 30)		
Total No. of Lectures: 30		
Unit	**Topics**	**No. of Lectures**
I	**Reading, Writing and Interpretation Skills: (Text-Based)** **1. The Express -Stephen Spender** **2. The World is Too Much with Us-William Wordsworth** **3. My Financial Career -Stephen Leacock** **4. Running for Governor-Mark Twain**	10
II	**Essay writing -Topical essays:** Terrorism, Covid -19 Pandemic, India and the Modern World, The Role of Women in the New Era, The Global World.	10
III	**(a) Communicative Skills:** Words often Confused, Misused, Idiomatic Expressions and Proverbs, etc. **(b) Essential Conversations:** Introducing Yourself, Introducing Other Persons, Meeting Someone First Time, At the Airport, Ordering Food in a Restaurant, Talking about a Movie, etc. **(c)** Filing an F.I.R., Writing a Resume, E-mail Writing, Blog Writing on a given topic. **Key Words:** Manifesto, Self- Possession, Streamline, Rage, Meteors, Fierce, Perjury, Intent, Campaign, Malicious, English Communication, Competence, Soft Skills, Practical Knowledge, Resume, CV, Blog, Blog Writer and E-mails.	10

PART C: Learning Resources

Textbooks, Reference Books, Other Resources

Suggested Readings and Web Materials:

1- Essential English Grammar – Raymond Murphy, Cambridge University Press.
2- Practical English Grammar Exercises 1- A. J. Thomson & A. V. Martinet, Oxford India.
3- Practical English Usage - Michael Swan, Oxford
4- English Grammar in Use – Raymond Murphy, Cambridge University Press.
5- Essays for UPSC Exams New Delhi.
6- A Practical Course in Spoken English- J K Gangal, PHI, New Delhi Publications.
7- Speak and Write Effectively- PDF materials on the web-NET
8- www.englishclub.com
9- www.eslfast.com
10- Swayam Portal

Part D: Assessment and Evaluation			
Max Marks: 50	**Min. Marks: 17**	**University Exam (UE)**	**Total:50**
U.E. Time 2 Hours			

	External Assessment (UE)	Time: 2 Hours	Marks
1.	Multiple Choice type questions	50 × 1	50

1-11-22

Dr. A S Kushwah

(Professor of English)

Forwarded
BR 11.22

Part A Introduction			
Program: Degree	**Class: B.A./B.Sc./B.Com./B.H.Sc./BCA**	**Year: III Year**	**Session: 2023-24**
Subject: Foundation Course			

1.	**Course Code**	**X3-FCBD1T**	
2.	**Course Title**	**Digital Awareness - Cyber Security**	
3.	**Course Type**	**Ability Enhancement Compulsory Course**	
4.	**Pre-requisite (if any)**	**Compulsory for all Third Year students**	
5.	**Course Learning outcomes (CLO)**	**After completing the course, student will be able to :** ● Make optimum use of web browsers, search engines and Chatbots ● Creating e-mail account, sending, receiving and managing emails. ● Describe reporting procedure of phishing emails. ● Identify email phishing attack and preventive measures. ● Configure security settings in Mobile Wallets and UPIs. ● Practice safe, legal and ethical means of using Information Technology. ● Practice and use the various online financial and government services of day-to-day use. ● Understand the basic concepts related to E-Commerce and digital payments. ● Discuss cyber security aspects, RBI guidelines and preventive measures against digital payment frauds. ● Explore and learn the online available courses of his/her interest. ● Use the Digilocker and Academic Bank of Credit. ● Describe the concept of Cyber security and issues and challenges associated with it. . ● Explain the process of reporting cyber crime at Cyber crime Police Station/ at online platform. ● Appreciate various privacy and security concerns on online Social media. ● Guide through the reporting procedure of inappropriate content. ● Perform privacy and security settings for popular Social media platforms.	
6.	**Credit Value**	**2**	
7.	**Total Marks**	**Max. Marks: 50**	**Min. Marks:**

Part B – Content of the Course		
	Total No. of Lectures 30 (01 hour per week)	
Unit	**Topics**	**No. of Lectures**
I	Overview of Computer and Web-technology, Architecture of cyberspace, World wide web, Advent of internet, Internet infrastructure for data transfer and governance, Internet society. **Use of Internet:** Web browsers, search engines and Chatbots. Difference between Website & Portal, E-mail: Account opening, sending & receiving e-mails, managing Contacts & Folders. **Computer Security**: Issues & protection, firewall & antivirus, making secure online transactions. Internet safety and digital security. Ethical use of digital resources, Measures of Online Self Protection. **Keywords**: ***Browser, Search Engine, Website, Virus, Security, Firewall, Cyber Ethics.***	**05**
II	**Digital Payments and e-Commerce:** Internet Banking: National Electronic Fund Transfer (NEFT), Real Time Gross Settlement (RTGS), Immediate Payment Service (IMPS) Digital Financial Tools: Understanding OTP [One Time Password], QR [Quick Response] Code, UPI [Unified Payment Interface], AEPS [Aadhaar Enabled Payment System]; USSD [Unstructured Supplementary Service Data], Card [Credit / Debit], eWallet, PoS [Point of Sale] **Definition of E-Commerce**- Main components of E-Commerce, Elements of E-Commerce security, E-Commerce threats, E-Commerce security best practices, Online Bill Payment. Digital payments related common frauds and preventive measures. RBI guidelines and provisions of Payment Settlement Act, 2007. **Keywords:Inetrnet Banking, Digital Financial Tools, eWallet, e-Commerce Security.**	**07**
III	**e-Governance Service-** Overview of e-Governance Services like Railway Reservation, passport, eHospital; Accessing various e-Governance Services on Mobile Using "UMANG APP". Exploring services and resources of Government of India Portal (https://www.mygov.in/). Digi-Locker: About digilocker, features and benefits of digilocker, Registering, accessing and getting various certificates and mark sheets on digilocker. Academic Bank of Credit (ABC): About ABC, features and benefits of ABC, Registering, accessing, getting and sharing academic credits. Exploring Online Learning resources: Online learning through SWAYAM Central, (https://swayam.gov.in/) and e-pathshala (https://epathshala.nic.in/). **Keywords:** ***Internet Banking, NEFT, RTGS, IMPS, OTP, UPI, QR Code, AEPS, E-Governance, Umang.***	**06**

IV	**Introduction to Cyber security-** Regulation of cyberspace, Concept of cyber security, Issues and challenges of cyber security. Definition of cyber crimes and offences, Cyber crime targeting computers and mobiles, Cyber crime against women and children, Cyber bullying. Financial frauds, Social engineering attacks, Malware and Ransomware attacks, zero day and zero click attacks. Cyber criminals modus-operandi, Reporting of cyber crimes, Remedial and mitigation measures, Legal perspective of cyber crime, IT Act 2000 and its amendments, Organisations dealing with Cyber crime and Cyber security in India, Case studies. **Keywords: Cyber Space, Cyber Security, Cyber Offences, Zero Click Attack, Zero Day Attack, Ransomware, Reporting Cyber Crimes, Cyber Crimes Case Studies.**	**05**
V	**Social Media Overview and Security-** Introduction to Social Networks, Types of Social media, Social media platforms, Social media monitoring, Hashtag, Viral content, Social media marketing, Social media privacy, Challenges, opportunities and pitfalls in online social network, Security issues related to social media, Flagging and reporting of inappropriate content, Laws regarding posting of inappropriate content, Best practices for the use of Social media, Case studies. **Keywords: Social Media Platforms, Hashtagging, Social Media Marketing, flagging of contents in social media.**	**06**

Part C-Learning Resources

Text Books, Reference Books, Other resources

Suggested Readings:

- Praveen Kumar Shukla, Surya Prakash Tripathi, Ritendra Goel "Introduction to Information Security and Cyber Laws" Dreamtech Press.
- Vivek Sood, "Cyber law simplified", Tata McGrawHill, Education (India).
- T. Bradley "Essential Computer Security: Everyone's Guide to Email, Internet, and Wireless Security".
- Cyber Crime Impact in the New Millennium, by R. C Mishra , Auther Press. Edition 2010.
- Cyber Security Understanding Cyber Crimes, Computer Forensics and Legal Perspectives by Sumit Belapure and Nina Godbole, Wiley India Pvt. Ltd. (First Edition, 2011)
- Security in the Digital Age: Social Media Security Threats and Vulnerabilities by Henry A. Oliver, Create Space Independent Publishing Platform. (Pearson , 13th November, 2001)
- Electronic Commerce by Elias M. Awad, Prentice Hall of India Pvt Ltd.
- Cyber Laws: Intellectual Property & E-Commerce Security by Kumar K, Dominant Publishers.
- Network Security Bible, Eric Cole, Ronald Krutz, James W. Conley, 2nd Edition, Wiley India Pvt. Ltd.
- Fundamentals of Network Security by E. Maiwald, McGraw Hill

Reference Books:

- M. Stamp, "Information Security: Principles and Practice", Wiley.
- David J. Loundy, "Computer Crime, Information Warfare, And Economic Espionage", Carolina Academic Press.

Suggested equivalent online courses: e-reading:

- **http://egyankosh.ac.in//handle/123456789/9489**
- **https://workspace.google.com/intl/en_in/training/**
- **https://www.classcentral.com/course/openlearn-science-maths-technology-preparing-your-96104**
- **https://www.udemy.com/course/free-computer-literacy-101-course/**
- **https://www.mygov.in/**
- https://epathshala.nic.in/
- https://www.digilocker.gov.in/
- https://www.abc.gov.in/
- https://swayam.gov.in/

PART D: Assessment and Evaluation

Suggested Evaluation Methods:
Maximum Marks: 50
University Exam (UE): 50 Marks

External Assessment: University Exam (UE): Time : **01.00 Hours**	50 Objective type questions	50 **Marks**

Any remarks/suggestions:

भाग अ - परिचय				
कार्यक्रम: उपाधि	कक्षा: बी.ए.एससी.बी/.कॉम.बी/.एससी.एच.बी/./बी.सी.ए.		वर्ष:तृतीय	सत्र: 2023-24
विषय: **आधार पाठ्यक्रम**				
1	पाठ्यक्रम का कोड	**X3-FCBD1T**		
2	पाठ्यक्रम का शीर्षक	डिजिटल जागरूकता -साइबर सुरक्षा		
3	पाठ्यक्रम का प्रकार	योग्यता संवर्धन अनिवार्य पाठ्यक्रम		
4	पूर्वापेक्षा (Prerequisite) (यदि कोई हो)	तृतीय वर्ष के सभी विद्यार्थियों के लिए अनिवार्य		
5	पाठ्यक्रम अध्ययन की परिलब्धियां (कोर्स लर्निंग आउटकम) **(CLO)**	**इस पाठ्यक्रम के सफल समापन पर, विद्यार्थी निम्न में सक्षम होंगे:** ● वेब ब्राउज़र, सर्च इंजन और चैटबॉट्स का उपयोग । ● ई-मेल खाता बनाना, ईमेल भेजना, प्राप्त करना और प्रबंधन । ● फ़िशिंग ईमेल की रिपोर्टिंग की प्रक्रिया का वर्णन । ● ईमेल फ़िशिंग अटैक और निवारक उपायों की पहचान । ● मोबाइल वॉलेट और UPI में सुरक्षा सेटिंग्स कॉन्फ़िगर करना । ● सूचना प्रौद्योगिकी का उपयोग करने के सुरक्षित, कानूनी और नैतिक मानकों के साथ प्रयोग । ● दैनिक उपयोग की विभिन्न ऑनलाइन वित्तीय और सरकारी सेवाओं का उपयोग । ● ई-कॉमर्स व डिजिटल भुगतान संबंधी बुनियादी अवधारणाओं की समझ । ● साइबर सुरक्षा पहलुओं, आरबीआई के दिशानिर्देशों और डिजिटल भुगतान में धोखाधड़ी के निवारक उपाय । ● उसकी रुचि के ऑनलाइन उपलब्ध पाठ्यक्रमों को एक्सप्लोर करना । ● डिजिलॉकर और अकादमिक बैंक ऑफ क्रेडिट का उपयोग । ● साइबर सुरक्षा की अवधारणा और इससे जुड़े मुद्दों और चुनौतियां । ● साइबर अपराध पुलिस स्टेशन/ऑनलाइन प्लेटफॉर्म पर साइबर अपराध की रिपोर्ट करने की प्रक्रिया । ● ऑनलाइन सोशल मीडिया पर विभिन्न गोपनीयता और सुरक्षा । ● अनुपयुक्त सामग्री की रिपोर्टिंग प्रक्रिया । ● लोकप्रिय सोशल मीडिया प्लेटफॉर्म के लिए गोपनीयता और सुरक्षा सेटिंग।		
6	क्रेडिट मान	**2**		
7	कुल अंक	अधिकतम अंक: 50	न्यूनतम उत्तीर्ण अंक:	

भाग ब- पाठ्यक्रम की विषयवस्तु		
कुल व्याख्यान संख्या- 30 (प्रति सप्ताह 01 घंटा)		
इकाई	**विषय**	**व्याख्यान संख्या** (1 **घंटा/ व्याख्यान**)
I	कंप्यूटर और वेब-प्रौद्योगिकी का अवलोकन, साइबरस्पेस का आर्किटेक्चर, वर्ल्ड वाइड वेब, इंटरनेट का आगमन, डेटा ट्रांसफर और गवर्नेंस के लिए इंटरनेट इंफ्रास्ट्रक्चर, इंटरनेट समाज। **इंटरनेट का उपयोग:** वेब ब्राउज़र, सर्च इंजन और चैटबॉट्स। वेबसाइट और पोर्टल, ई-मेल के बीच अंतर, ई-मेल खाता खोलना, ई-मेल भेजना और प्राप्त करना, कॉन्टेक्ट्स और फ़ोल्डर का प्रबंधन। **कंप्यूटर सुरक्षा:** मुद्दे और सुरक्षा, फ़ायरवॉल और एंटीवायरस, सुरक्षित ऑनलाइन लेनदेन करना। इंटरनेट सुरक्षा और डिजिटल सुरक्षा। डिजिटल संसाधनों का नैतिक उपयोग, ऑनलाइन आत्म सुरक्षा के उपाय। **Keywords**: ***Browser, Search Engine, Website, Virus, Security, Firewall, Cyber Ethics.***	**05**
II	**डिजिटल भुगतान और ई-कॉमर्स:** इंटरनेट बैंकिंग: नेशनल इलेक्ट्रॉनिक फंड ट्रांसफर (एनईएफटी), रीयल टाइम ग्रॉस सेटलमेंट (आरटीजीएस), तत्काल भुगतान सेवा (आईएमपीएस) डिजिटल वित्तीय उपकरण: ओटीपी [वन टाइम पासवर्ड], क्यूआर [क्विक रिस्पांस] कोड, यूपीआई [यूनिफाइड पेमेंट इंटरफेस], एईपीएस [आधार सक्षम भुगतान प्रणाली] को समझना; **USSD** [अनस्ट्रक्चर्ड सप्लीमेंट्री सर्विस डेटा], कार्ड [क्रेडिट/डेबिट], ई-वॉलेट, **PoS** [प्वाइंट ऑफ सेल] **ई-कॉमर्स की परिभाषा-** ई-कॉमर्स के मुख्य घटक, ई-कॉमर्स सुरक्षा के तत्व, ई-कॉमर्स सम्बन्धी खतरे, ई-कॉमर्स सुरक्षा सर्वोत्तम प्रथाएं, ऑनलाइन बिल भुगतान। डिजिटल भुगतान से संबंधित आम धोखाधड़ी और निवारक उपाय। आरबीआई के दिशानिर्देश और भुगतान निपटान अधिनियम, 2007 के प्रावधान। **Keywords:Inetrnet Banking, Digital Financial Tools, eWallet, e-Commerce Security.**	**08**
III	**ई-गवर्नेंस सर्विस-** रेलवे आरक्षण, पासपोर्ट, ई-अस्पताल जैसी ई-गवर्नेंस सेवाओं का अवलोकन; "उमंग ऐप" का उपयोग करके मोबाइल पर विभिन्न ई-गवर्नेंस सेवाओं तक पहुंचना। भारत सरकार के पोर्टल (https://www.mygov.in/) की सेवाओं और संसाधनों की खोज करना। **डिजी-लॉकर:** डिजिलॉकर के बारे में, डिजिलॉकर की विशेषताएं और लाभ, डिजीलॉकर पर विभिन्न प्रमाणपत्रों और मार्कशीट को पंजीकृत करना, एक्सेस करना और प्राप्त करना। **अकादमिक बैंक ऑफ क्रेडिट (एबीसी):** एबीसी का विवरण, एबीसी की विशेषताएं और लाभ, पंजीकरण, पहुंच, अकादमिक क्रेडिट प्राप्त करना और साझा करना।	**06**

	ऑनलाइन शिक्षण संसाधनों की खोज: SWAYAM Central (https://swayam.gov.in/) और ई-पाठशाला (https://epathshala.nic.in/) के माध्यम से ऑनलाइन शिक्षण। **Keywords:** ***Internet Banking, NEFT, RTGS, IMPS, OTP, UPI, QR Code, AEPS, E-Governance, Umang.***	
IV	**साइबर सुरक्षा का परिचय-** साइबरस्पेस का विनियमन, साइबर सुरक्षा की अवधारणा, साइबर सुरक्षा के मुद्दे और चुनौतियाँ। साइबर अपराध और उल्लंघनों की परिभाषा, कंप्यूटर और मोबाइल को लक्षित साइबर अपराध, महिलाओं और बच्चों के खिलाफ साइबर अपराध, साइबर बुलिंग। वित्तीय धोखाधड़ी, सोशल इंजीनियरिंग हमले, मैलवेयर और रैंसमवेयर हमले, जीरो डे और जीरो क्लिक अटैक। साइबर अपराधियों की कार्यप्रणाली-, साइबर अपराधों की रिपोर्टिंग, उपचारात्मक और शमन उपाय, साइबर अपराध का कानूनी परिप्रेक्ष्य, आईटी अधिनियम 2000 और इसके संशोधन, भारत में साइबर अपराध और साइबर सुरक्षा से निपटने वाले संगठन, केस स्टडी। **Keywords: Cyber Space, Cyber Security, Cyber Offences, Zero Click Attack, Zero Day Attack, Ransomware, Reporting Cyber Crimes, Cyber Crimes Case Studies.**	**05**
V	**सोशल मीडिया अवलोकन और सुरक्षा-** सोशल नेटवर्क का परिचय, सोशल मीडिया के प्रकार, सोशल मीडिया प्लेटफॉर्म, सोशल मीडिया मॉनिटरिंग, हैशटैग, वायरल कंटेंट, सोशल मीडिया मार्केटिंग, सोशल मीडिया प्राइवेसी, ऑनलाइन सोशल नेटवर्क में चुनौतियां, अवसर और नुकसान, सोशल मीडिया से संबंधित सुरक्षा मुद्दे, फ्लैगिंग और अनुपयुक्त सामग्री की रिपोर्टिंग, अनुपयुक्त सामग्री पोस्ट करने के संबंध में कानून, सोशल मीडिया के उपयोग के लिए प्रथाएं, केस स्टडी। **Keywords: Social Media Platforms, Hashtagging, Social Media Marketing, flagging of contents in social media.**	**06**

भाग स-अनुशंसित अध्ययन संसाधन

पाठ्य पुस्तकें, संदर्भ पुस्तकें, अन्य संसाधन

अनुशंसित सहायक पुस्तकें /ग्रन्थ/अन्य पाठ्य संसाधन/पाठ्य सामग्री:

Suggested Readings:

- Praveen Kumar Shukla, Surya Prakash Tripathi, Ritendra Goel "Introduction to Information Security and Cyber Laws" Dreamtech Press.
- Vivek Sood, "Cyber law simplified", Tata McGrawHill, Education (India).
- T. Bradley "Essential Computer Security: Everyone's Guide to Email, Internet, and Wireless Security".
- Cyber Crime Impact in the New Millennium, by R. C Mishra , Auther Press. Edition 2010.
- Cyber Security Understanding Cyber Crimes, Computer Forensics and Legal Perspectives by Sumit Belapure and Nina Godbole, Wiley India Pvt. Ltd. (First Edition, 2011)
- Security in the Digital Age: Social Media Security Threats and Vulnerabilities by Henry A. Oliver, Create Space Independent Publishing Platform. (Pearson , 13th November, 2001)
- Electronic Commerce by Elias M. Awad, Prentice Hall of India Pvt Ltd.
- Cyber Laws: Intellectual Property & E-Commerce Security by Kumar K, Dominant Publishers.

- Network Security Bible, Eric Cole, Ronald Krutz, James W. Conley, 2nd Edition, Wiley India Pvt. Ltd.
- Fundamentals of Network Security by E. Maiwald, McGraw Hill

Reference Books:

- M. Stamp, "Information Security: Principles and Practice", Wiley.
- David J. Loundy, "Computer Crime, Information Warfare, And Economic Espionage", Carolina Academic Press.

अनुशंसित समकक्ष ऑनलाइन पाठ्यक्रम:
Suggested equivalent online courses: e-reading:

- **http://egyankosh.ac.in//handle/123456789/9489**
- **https://workspace.google.com/intl/en_in/training/**
- **https://www.classcentral.com/course/openlearn-science-maths-technology-preparing-your-96104**
- **https://www.udemy.com/course/free-computer-literacy-101-course/**
- **https://www.mygov.in/**
- https://epathshala.nic.in/
- https://www.digilocker.gov.in/
- https://www.abc.gov.in/
- https://swayam.gov.in/

भाग द - अनुशंसित मूल्यांकन विधियां:

अनुशंसितसतत मूल्यांकन विधियां:
अधिकतम अंक: 50
विश्वविद्यालयीनपरीक्षा (UE) अंक:50

आकलन : **विश्वविद्यालयीन परीक्षा:** समय- 01.00 घंटे	वस्तुनिष्ठ प्रश्न - 50	**50**

कोई टिप्पणी/सुझाव:

Part A- Introduction

Program: Degree	Class: B.A./ B.Sc./ B.Com.	Year - III	Session: 2023-24

Subject- Foundation Course

1	**Course Code**	**X3-FCAC1T**
2	**Course Title**	**Personality Development and Character Building**
3	**Course Type**	**Ability Enhancement Compulsory Course**
4	**Pre-requisite (if any)**	**Compulsory for all Students**
5	**Course Learning outcomes (CLO)**	1. Students will acquire the conceptual knowledge of Personality Development. 2. Students will develop insight into character building. 3. Students will be able to become global visionary citizens. 4. Students will be able to understand Indian knowledge tradition. 5. Students will be able to understand the difference between nature, culture and distortion. 6. This course will help in character building and overall development of personality of the students.
6	**Credit Value**	2

Part B- Content of the Course

Total No. of Lectures + Practical (in hours per week): **L-1 Hr / P-1 Lab Hr (=2 Hrs)**

Total No. of Lectures/ Practical: **L-30 /P-0 (30 Hrs)**

Unit	Topics	No. of lectures (Total 30)
1	• Personality development (Physical, mental, intellectual and spiritual development) meaning, concept, factors of personality development. • Character building (personal and national character): Meaning, concept, factors of character and means of character building. • Panchkosha, Annamaya Kosha, Pranamaya Kosha, Manomaya Kosha, Vigyanmaya Kosha and Anandamaya Kosha general introduction meaning purpose and importance. • Benefits of Panchkosh development and means of developing Panchkosh.	06 Theoretical 04 Experiential
2	• Physical and mental development • Meaning, concept of physical and mental development • Ideal daily routine, balanced diet, routine, subtle exercise • Ashtanga Yoga-Yama Niyam, Ishwar Pranidhan, self-study, contentment, patience, virtue, practice of discipline. • Past glory, social and citizenship awareness, equal respect to all sects and scientific outlook • Nation, Nationality, Democracy, Independence, Suraj, Vasudhaiva Kutumbakam, Coexistence.	06 Theoretical 04 Experiential

3	• Moral and mental development • Difference among happiness, joy and pleasure. • Ashtanga Yoga, Pranayama, Pratyahara, Dharana, Dhyana, Samadhi. • Continuity of Karmayoga, Bhaktiyoga, Jnanayoga in life according to one's own will • Indian time calculation. • Self-respect and contemplation of mother tongue and Indian knowledge tradition. • Biographies of Legends. • Practice of service, tolerance, charity, dedication and self-examination. Self reliance	06 Theoretical 04 Experiential

Part C- Learning Recourses

Text Books, Reference Book, Other resources

Suggested Readings:-

1- उच्च शिक्षा भारतीय दृष्टि- श्री अतुल कोठारी

2- अदम्य साहस - डॉ.ए.पी.जे. अब्दुल कलाम

3- व्यक्तित्व विकास - स्वामी विवेकानंद रामकृष्ण मिशन

4- आत्मतत्व का विस्तार - श्रुतम प्रकाशन जोधपुर

5- भारतीय मनोविज्ञान - श्री लज्जाराम तोमर

6- उपनिषद विशेषांक - गीता प्रेस गोरखपुर

7- भारतीय ज्ञान परम्परा वोध - हिंदी ग्रंथ अकादमी म.प्र.

Suggested digital platforms web links:-

21-04-2023
Prof. H.K. Nagaich

भाग – अ परिचय

कार्यक्रम– उपाधि	**Class:** B.A. / B.Sc./ B.Com.	वर्ष तृतीय वर्ष	स्त्र 2023–24

विषय– आधार पाठ्यक्रम

1	पाठ्यक्रम का कोड	**X3-FCAC1T**
2	पाठ्यक्रम का शीर्षक	व्यक्तित्व विकास और चरित्र निर्माण
3	पाठ्यक्रम का प्रकार	**योग्यता संवर्धन अनिवार्य पाठ्यक्रम**
4	पूर्वापेक्षा	**सभी विद्यार्थियों के लिए अनिवार्य**
5	पाठ्यक्रम अध्ययन की उपलब्धियॉ (कोर्स लर्निंग आउटकम)	1. विद्यार्थी व्यक्तित्व विकास का ज्ञान अर्जित करेगें। 2. विद्यार्थियों चरित्र निर्माण की अंतर्दृष्टि विकसित करेंगे । 3. विद्यार्थी वैश्विक दृष्टि प्राप्त नागरिक बन सकेंगे । 4. विद्यार्थी भारतीय ज्ञान परम्परा को समझने में सक्षम होंगे । 5. विद्यार्थी प्रकृति, संस्कृति और विकृति के अंतर को समझ सकेंगे । 6. यह पाठ्यक्रम विद्यार्थियों के चरित्र निर्माण और व्यक्तित्व के समग्र विकास में सहायक होगा।
6	क्रेडिटमान	2

भाग ब– पाठ्यक्रम की विषय वस्तु

व्याख्यान की कुल संख्या– ट्यूटोरियल–प्रायोगिक (प्रति सप्ताह घण्टे में)

इकाई	विषय	व्याख्यान की संख्या (30)
1	• व्यक्तित्व विकास (शारीरिक, मानसिक, बौद्धिक और आध्यात्मिक विकास) अर्थ, अवधारणा, व्यक्तित्व विकास के कारक तत्व। • चरित्र निर्माण (व्यक्तिगत एवं राष्ट्रीय चरित्र) अर्थ, अवधारणा, चरित्र के कारक तत्व तथा चरित्र निर्माण के साधन। • पंचकोष, अन्नमय कोष, प्राणमय कोष, मनोमय कोष, विज्ञानमय कोष एवं आनंदमय कोष सामान्य परिचय अर्थ उद्देश एवं महत्व। • पंचकोष विकास के लाभ तथा पंचकोष विकसित करने के साधन।	06 सैद्धांतिक 04 व्यावहारिक
2	• शारीरिक एवं मानसिक विकास • शारीरिक एवं मानसिक विकास के अर्थ, संकल्पना • आदर्श दिनचर्या, संतुलित आहार, ऋतुचर्या, सूक्ष्म व्यायाम • अष्टांग योग–यम नियम, ईश्वर प्राणिधान, स्वाध्याय, संतोष धैर्य, सदाचार, अनुशासन का अभ्यास। • अतीत गौरव, सामाजिक एवं नागरिकता बोध, सर्वपंथ समादर एवं वैज्ञानिक दृष्टिकोण • राष्ट्र, राष्ट्रीयता, लोकतंत्र, स्वाधीनता, सुराज, वसुधैव कुटुम्बकम, सह अस्तित्व।	06 सैद्धांतिक 04 व्यावहारिक

3	• नैतिक और आत्मिक विकास । • सुख, प्रसन्नता और आनंद में अंतर । • अष्टांग योग, प्राणायाम, प्रत्याहार, धारणा, ध्यान, समाधि । • कर्मयोग, भक्तियोग, ज्ञानयोग की जीवन में स्वेच्छानुसार निरंतरता • भारतीय काल गणना । • मातृभाषा और भारतीय ज्ञान परम्परा का स्वाभिमान और चिंतन । • महापुरूषों का जीवन चरित्र पठन । • सेवा, सहिष्णुता, परोपकार, समर्पण और आत्मपरीक्षण का अभ्यास, स्वाबलंबन ।	06 सैद्धांतिक 04 व्यावहारिक

भाग स – अनुशंसित अध्ययन संसाधन

पाठयपुस्तकें, संदर्भ पुस्तकें, अन्य संसाधन

अनुशंसित सहायक पुस्तकेः–

संदर्भ ग्रंथ सूची -

1- उच्च शिक्षा भारतीय दृष्टि- श्री अतुल कोठारी

2- अदम्य साहस - डॉ.ए.पी.जे. अब्दुल कलाम

3- व्यक्तित्व विकास - स्वामी विवेकानंद रामकृष्ण मिशन

4- आत्मतत्व का विस्तार - श्रुतम प्रकाशन जोधपुर

5- भारतीय मनोविज्ञान - श्री लज्जाराम तोमर

6- उपनिषद विशेषांक - गीता प्रेस गोरखपुर

7- भारतीय ज्ञान परम्परा वोध - हिंदी ग्रंथ अकादमी म.प्र.

अनुशंसित डिजिटल प्लेटफार्म बेव लिंकः

21-04-2023

Prof. N.K. Nagaich