SHRI VAISHNAV INSTITUTE OF MANAGEMENT & SCIENCE, INDORE

(Autonomous)

Approved by AICTE, New Delhi and Affiliated to DAVV, Indore & RGPV, Bhopal, Madhya Pradesh, India UGC-NAAC Accredited 'A' Grade Institute

ISO 9001:2015 Certified

Syllabus

Bachelor of Computer Applications

[BCA]

Year I / Semester I

w.e.f. Session 2025-26

Scheme No. 71, Gumasta Nagar, Indore-452009 Madhya Pradesh, Ph. : 0731-2780011, 2789925

Toll Free No. : 1800 233 2601 Website : www.svimi.org E-mail address : svimi@svimi.org

Shri Vaishnav Institute of Management & Science, Indore				
BCA I Semester (Course Details)				
Session July 2025 – June 2026				
Sr. No.	**Course Type**	**Course Code**	**Subject Name**	**Total Credits**
1	Core Course (Major 1) (C -1)	BCA – 101 (T)	Computer Architecture (Theory)	4
		BCA – 101 (P)	Computer Architecture (Practical)	2
2	Minor 1 (M – 1)	BCA – 102 (T)	Mathematical Foundations to Computer Science (Theory)	4
3	Multidisciplinary Course (MDC)	BCA – 103 (T)	Artificial Intelligence for Everyone (Theory)	2
		BCA – 103 (P)	Artificial Intelligence for Everyone (Practical)	1
4	Ability Enhancement Course AEC - 1	AEC – 101	Hindi Bhasha aur Sanskriti	2
5	Skill Enhancement Course SEC – (VOC) – 1)	SEC – 101	Digital Marketing	3
6	Internship/ Apprenticeship/ Project Work/ Community Engagement	PW/Ap/CE - 101	Project Work	2
			Total Credits	**20**

PART-A : Introduction			
Programme : BCA	**Class : I Year**	**Semester : I**	**Session : Session : July 2025-June 2026**
Subject : Computer Application			**Theory / Practical: Theory**
1.	**Course Code**	BCA-101 (T)	
2.	**Course Title**	Computer Architecture (Theory)	
3.	**Course Type (Core Course/DSE/Minor/MD-ID/SEC/VOC)**	Major-I (Core Course)	
4.	**Pre-Requisite (if any)**	Not Required	
5.	**Course Objectives**	1. To familiarize students with the number systems, basic logic gates, boolean algebra and define characteristics of logic families and calculate their parameters. 2. To illustrate the working mechanism of different combinational circuits in the digital system. 3. To analyze the working mechanism of different sequential circuits. 4. To familiarize with the organization and design of memory system, instruction cycles, instructions formats, addressing modes. 5. To introduce students to the concept of Hardware vs. Micro programmed Control unit, pipelining, Data transfer Schemes, DMA, and Interrupts.	
6.	**Course Outcomes (COs)**	On completion of this course, students will be able to: CO 1- Understand the basic structure, operation and characteristics of digital computer. CO 2- Design simple combinational digital circuits based on given parameters. CO 3- Familiarity with working of arithmetic and logic unit. CO 4- Know about hierarchical memory system including cache memories and virtual memory. CO 5- Know the contributions of Indians in the field of computer architecture and related technologies.	
7.	**Credit Value**	4 Theory – Credits	
8.	**Total Marks**	**Max. Marks:** 30+70	**Min. Passing Marks:** 35

PART-B : Content of the Course		
No. of Lectures per week : 06		
Total No. of Lectures required : 60		
Unit	**Topics**	**No. of Lectures required**
I	**Indian Knowledge System:** Ancient Indian Contribution in Computer Architecture: Pingala's "Chandahśāstra", Panini Sanskrit Grammar. Modern Contribution: Dr. Vinod Dhami, Dr. Ajay Bhat, Dr. Vinod Khosla, Dr. Vijay P Bhatkar.	02
	Suggested Activities: Debate on Pingala's "Chandahśāstra", Panini Sanskrit Grammar. Solve real-world problems inspired by PARAM's computational models. Discuss on Indian contributions to computing,	
II	**Fundamentals of Digital Electronics**: Decimal, Binary, Octal, Hexadecimal, Number System Conversions, Binary Arithmetic, Addition and subtraction of BCD, Octal Arithmetic, Hexadecimal Arithmetic, Binary Codes, Decimal Codes, Error detecting and correcting codes, ASCII, EBCDIC, Excess-3 Code, The Gray Code. Logic Gates, Boolean Algebra, Map Simplification, Combinational Circuits, Sequential Circuits, simple combinational circuit design problems.	12
	Suggested Activities: Assignment on number systems, Verifying logic gates through truth tables,	
III	**Combinational Circuits**: Half Adder and Full Adder, Subtractor, Decoders, Encoder, Multiplexer, Demultiplexer. Sequential Circuits: Flip-Flops- SR Flip- Flop, D Flip-Flop, J-K Flip-Flop, T Flip-Flop. Register: 4 bit register with parallel load, Shift Registers- Bidirectional shift register with parallel load Binary. Counters: 4 bit synchronous and Asynchronous binary counter.	12
	Suggested Activities: Designing combinational circuits, Hands-on session on designing adders and multiplexers, use simulation software to design basic combinational circuits, Students work in teams to optimize logic circuits for efficiency, Debate on advancements in digital logic design.	

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. **Suggested Activities:** Understand how processors access operands in memory, Implement AND, OR, XOR operations at the bit level, explore Panini's rule-based grammar and compare it with modern instruction set design, debate on addressing modes and their use cases.	12
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. **Suggested Activities:** Debate on Hardware vs. Microprogrammed Control, Assignment on designing a simplified processor. Discussion on RISC vs. CISC architectures, Analyze how modern processors handle instruction execution.	12
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, Auxiliary memory, Cache Memory, Associative Memory, Interleaving, Virtual Memory, Memory Management.	12

	Suggested Activities: Understanding memory allocation in modern computers, Compare manuscript storage methods with modern hierarchical memory, Field Visit (if possible): Visit a digital archive/library to understand memory organization.	

Part – C : Learning Resources
Textbooks, Reference Books, Other Resources
Suggested Readings:
Textbooks: 1. Gerard G. Emch, R. Sridharan, M. D. Srinivas: Contributions to the History of Indian Mathematics, Hindustan Book Agency, Vol. 3, 2005. 2. Udayan S. Patankar & Sunil M. Patankar: Elements of Vedic Mathematics, TTU Press, Tallinn 2018. 3. M. Morris Mano: "Computer System Architecture", PHI. 4. Heuring Jordan: "Computer System Design & Architecture" (A.W.L.). 5. Donald P Leach, Albert Paul Malvino, Goutam Saha: "Digital Principles & Applications", Tata McGraw Hill Education Private Limited, 2011Edition. 6. मध्य प्रदेश हिन्दी ग्रंथ अकादमी की पुस्तकें ।
Reference Books: 1. William Stalling, "Computer Organization & Architecture", Pearson Education Asia. 2. V. Carl Hamacher , "Computer Organization", TMH . 3. Tannenbaum, "Structured Computer Organization", PHI. 4. Er. Rajiv Chopra, "Computer Architecture", Revised 3rd Edition, S. Chand & Company Pvt. Ltd.
Suggestive Digital Platform Web Links: 1. https://epgp.inflibnet.ac.in **2.** https://www.eshiksha.mp.gov.in/mpdhe
Suggested Equivalent Online Courses: 1. https://nptel.ac.in/courses/106/105/106105163/ 2. https://nptel.ac.in/courses/106/106/106106166/ 3. https://nptel.ac.in/courses/106/106/106106134/

Part D: Assessment and Evaluation		
Suggested Continuous Evaluation Methods: Maximum Marks: 100 Marks Continuous Comprehensive Evaluation (CCE): 30 Marks University Exam (UE): 70 Marks		
Internal Assessment Continuous Comprehensive Evaluation (CCE)		**Total Marks :** 30
External Assessment University Exam Section Time: 03.00 hours.	**Section (A)** : Very Short Questions **Section (B)** : Short Questions **Section (C)** : Long Questions	**Total Marks :** 70

PART-A : Introduction			
Programme : BCA	**Class : I Year**	**Semester : I**	**Session : July 2025-June 2026**
Subject : Computer Application			**Theory / Practical: Practical**
1.	**Course Code**	BCA-101 (P)	
2.	**Course Title**	Computer Architecture (Practical)	
3.	**Course Type (Core Course/DSE/Minor/MD-ID/SEC/VOC)**	Major-I (Core Course)	
4.	**Pre-Requisite (if any)**	Not Required	
5.	**Course Objectives**	1. To familiarize students with the number systems, basic logic gates, Boolean algebra and define characteristics of logic families and calculate their parameters. 2. To illustrate the working mechanism of different combinational circuits in the digital system. 3. To analyze the working mechanism of different sequential circuits.	
6.	**Course Outcomes (COs)**	On completion of this course, students will be able to: CO 1- Realization of the basic logic and universal gates. CO 2- Verify the behavior of logic gates using truth tables. CO 3- Implement Binary-to -Gray, Gray-to -Binary code conversions. CO 4- Design half and full adder circuit using basic gates. CO 5- Design and construct flip flops and verify the excitation tables.	
7.	**Credit Value**	**Practical –** 2 Credits	
8.	**Total Marks**	**Max. Marks:** 100	**Min. Passing Marks:** 35

PART B : Content of the Course	
Suggestive list of Practical's	**No. of Labs**
1. Verification and interpretation of truth table for AND, OR, NOT gates. 2. Verification and interpretation of truth table for NAND, NOR gates. 3. Verification and interpretation of truth table for Ex-OR, Ex-NOR gates. 4. Study of Half adder using XOR and NAND gates and verification of its operation. 5. Study of Full adder using XOR and NAND gates and verification of its operation. 6. Study of Half subtractor and verification of its operation. 7. Study of Full subtractor and verification of its operation. 8. Realization of logic functions with the help of NAND -Universal gates. 9. Realization of logic functions with the help of NOR -Universal gates. 10. Verify the truth table of RS flip-flops using NAND and NOR gates. 11. Verify the truth table of JK flip-flops using NAND and NOR gates. 12. Verify the truth table of T and D flip-flops using NAND and NOR gates. 13. Implementation of 4x1 Multiplexer using logic gates. 14. Implementation of 1x4 Demultiplexer using logic gates. 15. Verify Gray to Binary conversion using NAND gates only. 16. Verify Gray to Binary conversion using NAND gates only.	30

Part – C : Learning Resources
Textbooks, Reference Books, Other Resources
Suggested Readings:
Textbooks: 1. Gerard G. Emch, R. Sridharan, M. D. Srinivas: Contributions to the History of Indian Mathematics, Hindustan Book Agency, Vol. 3, 2005. 2. Udayan S. Patankar & Sunil M. Patankar: Elements of Vedic Mathematics, TTU Press, Tallinn 2018. 3. M. Morris Mano: "Computer System Architecture", PHI. 4. Heuring Jordan: "Computer System Design & Architecture" (A.W.L.). 5. Donald P Leach, Albert Paul Malvino, Goutam Saha: "Digital Principles & Applications", Tata McGraw Hill Education Private Limited, 2011Edition. 6. मध्यप्रदेश हिन्दी ग्रंथ अकादमी की पुस्तकें।
Reference Books: 1. William Stalling, "Computer Organization & Architecture", Pearson Education Asia. 2. V. Carl Hamacher , "Computer Organization", TMH 3. Tannenbaum, "Structured Computer Organization", PHI. 4. Er. Rajiv Chopra, "Computer Architecture", Revised 3rd Edition, S. Chand & Company Pvt. Ltd.
Suggestive Digital Platform Web Links: 1. https://epgp.inflibnet.ac.in 2. https://www.eshiksha.mp.gov.in/mpdhe

Suggested Equivalent Online Courses:

1. https://nptel.ac.in/courses/106/105/106105163/
2. https://nptel.ac.in/courses/106/106/106106166/
3. https://nptel.ac.in/courses/106/106/106106134/

Part D: Assessment and Evaluation			
Suggested Continuous Evaluation Methods :			
Internal Assessment	**Marks**	**External Assessment**	**Marks**
Class Interaction/Quiz	30	Viva Voce Practical	70
Attendance		Practical Record File	
Assignments (Charts/ Model/ Seminars/ Technology Dissemination/ Excursion/ Lab Visit/ Industrial Visit		Table Work/ Experiment	

PART-A : Introduction		
Programme : BCA	**Class : I Year**	**Semester : I** **Session : July 2025-June 2026**
Subject : Computer Application		**Theory / Practical: Theory**
1.	**Course Code**	BCA-102 (T)
2.	**Course Title**	Mathematical Foundations to Computer Science (Theory)
3.	**Course Type (Core Course/DSE/Minor/MD-ID/SEC/VOC)**	Minor-I
4.	**Pre-Requisite (if any)**	To study this course, a student must have basic knowledge of Mathematics.
5.	**Course Objectives**	1. To develop a strong mathematical foundation for applications in image processing, computer graphics, data analysis, and related computational domains. 2. To enable understanding and implementation of linear algebra concepts such as matrices and linear transformations for solving problems in 3D modeling, robotics, cryptography, and artificial intelligence. 3. To cultivate analytical and logical reasoning skills by applying principles of propositional and predicate logic for sound decision-making and problem-solving. 4. To apply set theory, graph theory, and algorithmic techniques for modeling and solving conceptual as well as real-world computational problems. 5. To introduce statistical and data representation techniques such as frequency distributions for efficient data analysis, anomaly detection, and performance optimization in computational systems.
6.	**Course Outcomes (COs)**	On completion of this course, students will be able to: CO 1- Perform key operations for image processing, computer graphics, and data analysis. CO 2- Understand and implement linear transformations in 3D modeling, robotics, and neural networks. CO 3- Solve linear systems that arise in cryptography, game development, and AI algorithms. CO 4- Use matrices in machine learning models for efficient data manipulation and optimization. CO 5- Implement algorithms that involve graph theory, network flow analysis, and dynamic systems. Using the principles of logic to distinguish between sound and unsound reasoning in discourse

		of everybody. CO 6- Construct truth tables for logical expressions; test statements for logical equivalence and represent mathematical statements in the language of predicate language. CO 7- Understand the appropriate set theoretic concepts, thinking process, tools and techniques in the solution to various conceptual or real-world problems. CO 8- Understand Frequency Distributions that helps in efficiently summarizing and analyzing large datasets, detecting anomalies, and optimizing algorithms for better performance in areas like searching, sorting, and recommendation systems.	
7.	**Credit Value**	4 Theory – Credits	
8.	**Total Marks:** 30 + 70	**Max. Marks:** 30 + 70	**Min. Passing Marks:** 35

PART B : Content of the Course		
No. of Lectures (in hours per week) : 4		
Total No. of Lectures : 60 Hrs.		
Module	**Topics**	**No. of Lectures**
I	**Indian Knowledge System :** Basic concepts of Mathematical Logic in ancient India : Panini's Logical Structure, Avaktavtakta, Navya-Nyaya Logic. Indian Contributions in Statistics : P.C. Mahalanobis, C. Radhakrishna Rao, Samanta Chandra Sekhar Harichandan, J. K. Ghose, P. Maiti.	05
	Suggested Activities: Decoding Ancient Logic, Statistical Legends: A Tribute to Indian Pioneers, Logic Meets Statistics: A Fun Debate.	
II	**Determinants:** Basic Properties of Determinants, Minor determinant, Co-factors, Applications of determinants in finding the area of a triangle. **Matrices:** Concept of Matrices, Notation, order and equality of Matrices, Types of Matrices, Operations on Matrices, Addition and multiplication, Multiplicationwithascalar,Simplepropertiesofaddition,multiplication and scalar multiplication, Transpose of a Matrix, Application of Matrices to solve real world problems.	15
	Suggested Activities: Applications of Matrices to solve the problems related to Industries, Business, Economics and real world problems.	
III	**Statistics:** Frequency distribution, Measures of central tendency: Mean, Median, Mode. Measure of dispersion: mean deviation, variance and standard deviation of ungrouped/grouped data.	20
	Suggested Activities : Applications of Mean, Median, Mode, mean deviation, Variance and standard deviation to solve the problems related to Industries, Business, Economics and real world problems.	
IV	**Mathematical Logic:** Statements and notations, Propositions and Truth table, Negation, Conjunction and Disjunction, Implications and Double implication, Bi-conditional propositions, Contrapositive Implication and converse, Contrapositive and inverse propositions, Tautology and Contradiction, Logical equivalences, De-Morgan Law.	20
	Suggested Activities: Applications of Mathematical Logic to solve the problems related to Industries, Business, Economics and real world problems.	

PARTC : Learning Resources
Text books, Reference Books ,Other Resources
Suggested Readings:
Textbooks: 1. Gerard G. Emch, R.Sridharan, M.D. Srinivas : Contributions to the History of Indian Mathematics, Hindustan Book Agency, Vol. 3, 2005. 2. Udayan S. Patankar & Sunil M. Patankar : Elements of Vedic Mathematics, TTU Press,Tallinn 2018. 3. Nita H. Shah, Foram A.Thakkar : Matrix and Determinant Fundamentals and Applications, CRC Press, 2020. 4. H.C. Saxena and J. N. Kapoor : Mathematical Statistics, S. Chand and Company, 2010. 5. R. M. Somasundaram : Discrete Mathematical Structures, PHI Learning Pvt.Ltd.,2003.
Reference Books: 1. HariKishan : A Text book of Matrices, Atlantic Publishers &Dist, 2008. 2. Shanti Narayan and P K Mittal : A Text book of Matrices, S. Chand Publishing, 1953. 3. E.Rukmangadachari : Probability and Statistics, Pearson Education India ; Firstedition,2012. 4. R.P.Grimaldi, Discrete Mathematics and Combinatorial Mathematics, Pearson Education, 1998.
Suggestive Digital Platform Web Links:
https://www.eshiksha.mp.gov.in/mpdhe https://epgp.inflibnet.ac.in
Suggested Equivalent Online Courses:
https://nptel.ac.in/courses/111106112/ https://nptel.ac.in/courses/111105090/ https://nptel.ac.in/courses/108104157

Part D: Assessment and Evaluation		
Suggested Continuous Evaluation Methods: Maximum Marks: 100 Marks Continuous Comprehensive Evaluation (CCE) : 30 Marks University Exam(UE): 70 Marks		
Internal Assessment: Continuous Comprehensive Evaluation (CCE)		**Total Marks :** 30
External Assessment: University Exam Section Time: 03.00 Hours	**Section(A):**Very Short Questions **Section (B) :** Short Questions **Section (C) :** Long Questions	**Total Marks:** 70

PART-A : Introduction		
Programme : BCA	**Class : I Year**	**Semester : I** **Session : July 2025-June 2026**
Subject : Computer Science		**Theory / Practical: Theory**
1.	**Course Code**	BCA-103 (T)
2.	**Course Title**	Generic(TH): Artificial Intelligence (AI) for Everyone
3.	**Course Type (Core Course/Elective/Generic Elective/Vocational**	Generic (Multidisciplinary)
4.	**Pre-Requisite (if any)**	This course does not assume prior knowledge and is suitable for students from all disciplines
5.	**Course Objectives**	1. To understand how AI relates to Augmented Intelligence and human capabilities. 2. To examine real-world case studies of AI applications in education, healthcare, and agriculture. 3. To gain awareness of modern Generative AI tools such as ChatGPT, Google Bard, and GitHub Copilot. 4. To understand the ethical challenges and social implications of AI use. 5 To identify career opportunities in AI and related technologies.
6.	**Course Outcomes (COs)**	On completion of this course, learners will be able to: CO 1- Understand (Level-I) the essentials of AI. CO 2- Differentiate (Level-2) between the traditional and Generative AI. CO 3- Use (Level-4to6) various AI tools in daily-life. CO 4- Use various AI applications (Level-6) and tools. CO 5- Can use AI (Level-6) in the field of Agriculture, Healthcare and Education. **Note:** Level of Bloom's Taxonomy is mentioned in the brackets.
7.	**Credit Value**	Theory- 02 Credits
8.	**Total Marks**	Max. Marks: 30+70 \Min. Passing Marks: 35

PART-B : Content of the Course		
No. of Lectures per week : 02		
Total No. of Lectures required : 30		
Unit	**Topics**	**No. of Lectures required**
I	**Introduction to Artificial Intelligence:** • What is AI? History and Evolution, Traditional AI vs. Generative AI • Artificial Intelligence vs. Augmented Intelligence • Key milestones and personalities (Turing, McCarthy) • Overview of Generative Al • IKS: Intelligence in Indian philosophy – Nyaya Darshan • **Activity:** Create a concept map of AI evolution using free mind-mapping tools.	06
II	**Everyday Applications of AI:** • AI in daily life: smartphones, onlineshopping, recommendation systems • AI Chat bots and Smart Assistants • Case studies: AI in education, healthcare, agriculture • IKS: Traditional Indian expert systems (e.g., Jyotish a logic) • **Activity:** Analyze how AI tools work in Google Maps or You Tube suggestions.	06
III	**Introduction to Al Tools:** • Applications of AI in Different Industries • Generative AI Tools and Applications overview: Chat GPT, Google Bard, Git Hub Copilot • AI in Spreadsheet, Text-editor and Presentation applications • AI in image, text, and code generation • Open-source tools: NumPy, Pandas(basics) • **Activity:** Hands-on demo of Chat GPT and Bard for summarizing articles.	06
IV	**Ethical Use of AI:** • Privacy, bias, misuse information, and plagiarism risks • Overview of Plagiarism checking tools (e.g., Grammarly, Turn it in) • Guide lines for ethical use in academics and research • **Activity:** Discussion on AI misuse in exams or content generation.	06
V	**Future of AI and Human Skills:** • Emerging AI trends (LLMs, robotics, NLP) • Human-AI collaboration and skill requirements • Careers in AI and digital economy • IKS: Long-term thinking from Indian philosophy in AI ethics	06

Part – C : Learning Resources
Textbooks, Reference Books, Other Resources
Suggested Readings: 1.Dan W. Patterson "Introduction to Artificial Intelligence and Expert Systems", Prentice India. 2. Nils J. Nilson "Principles of Artificial Intelligence", Narosa Publishing House. 3. Principles of Artificial Intelligence— Nils J. Nilsson 4."Artificial Intelligence for BCA" by Harisha Naik T.

Suggestive Digital Platform Web Links:
• https;//openai.com
• https://gemini.goagle.com
• https://indiaai.gav.in
• https;//www.geeksforgeeks.org/intraductian-ta-artificial-intefligence/
• https;//chat.openai.com

Part D: Assessment and Evaluation		
Suggested Continuous Evaluation Methods: Maximum Marks: 100 Marks Continuous Comprehensive Evaluation (CCE): 30 Marks University Exam (UE): 70 Marks		
Internal Assessment Continuous Comprehensive Evaluation (CCE)		**Total Marks :** 30
External Assessment University Exam Time: 03.00 hours.	**Section (A)** : Objective Type **Section (B)** : Short Questions **Section (C)** : Long Questions	**Total Marks :** 70

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Madhya Pradesh, India UGC-NAAC Accredited 'A' Grade Institute
ISO 9001:2015 Certified

PART-A : Introduction			
Programme : BCA	**Class : I Year**	**Semester : I**	**Session : July 2025-June 2026**
Subject : Computer Application			**Theory / Practical: Practical**
1.	**Course Code**	BCA-103 (P)	
2.	**Course Title**	Generic (Practical) : Artificial Intelligence (AI) for Everyone	
3.	**Course Type (Core Course/DSE/Minor/MD-ID/SEC/VOC)**	Generic (Multidisciplinary)	
4.	**Pre-Requisite (if any)**	This course does not assume prior knowledge and is suitable for students from all disciplines.	
5.	**Course Objectives**	1. To understand how AI relates to Augmented Intelligence and human capabilities. 2. To examine real-world case studies of AI applications in education, healthcare, and agriculture. 3. To gain awareness of modern Generative AI tools such as ChatGPT, Google Bard, and GitHub Copilot. 4. To understand the ethical challenges and social implications of AI use. 5 To identify career opportunities in AI and related technologies.	
6.	**Course Outcomes (COs)**	On completion of this course, learners will be able to: CO 1- Develop(Level-6) simple chat bots from AI CO 2- Apply AI(Level-6)tools for daily working. CO 3- Make content generation thorough AI. CO 4- Can make (Level-6)presentations easily using AI tools in Excel/PowerPoint/ Canva. CO 5-Understand the Plagiarism and its software's.	
7.	**Credit Value**	Practical – 1 Credit	
8.	**Total Marks**	**Max. Marks:** 100	**Min. Passing Marks:** 35

PART B : Content of the Course	
Suggestive list of Practical	**No. of Labs**
Suggestive AI based Exercise for Laboratory: **Exercise 1:Introduction to AI via ChatGPT and Gemini** • Explore different prompts in ChatGPT, Gemini • Experiment with translation, explanation, and summarization **Exercise 2:AI in Everyday Use** • Search and test: Al in Gmail, Google Photos, or Netflix • Write a short reflection on any 3 Al services you use daily **Exercise 3: Content Generation Tools** • Use Canva, AI DALL·E, Notion Al, or similar for visual/text generation • Compare results of two tools on the same input **Exercise 4: AI Ethics and Plagiarism Tools** • Try Quillbot/Grammarly to paraphrase • Check originality using PlagScan or Scriber **Exercise 5: Mini Project** • Create a slide deck on AI for agriculture/education using AI tools • Present your findings in class	**30**

Part – C : Learning Resources
Textbooks, Reference Books, Other Resources
Suggested Readings: 1. Dan W. Patterson "Introduction to Artificial Intelligence and Expert Systems", Prentice India. 2. Nils J. Nilson "Principles of Artificial Intelligence", Narosa Publishing House. 3. Principles of Artificial Intelligence— Nils J. Nilsson 4."Artificial Intelligence for BCA" by Harisha Naik T.

Suggestive Digital Platform Web Links:
• https;//openai.com
• https://gemini.goagle.com
• https://indiaai.gav.in
• https;//www.geeksforgeeks.org/intraductian-ta-artificial-intefligence/
• https;//chat.openai.com

<table>
<tr><th colspan="4">Part D: Assessment and Evaluation</th></tr>
<tr><td colspan="4">Suggested Continuous Evaluation Methods</td></tr>
<tr><td>Internal Assessment</td><td>Marks</td><td>External Assessment</td><td>Marks</td></tr>
<tr><td>Class Interaction/Quiz</td><td rowspan="4">NIL</td><td>Viva Voce Practical (20 Marks)</td><td rowspan="4">100</td></tr>
<tr><td>Attendance</td><td>Practical Record File (20 Marks)</td></tr>
<tr><td>Assignments (Charts/ Model/ Seminars/ Technology Dissemination/ Excursion/ Lab Visit/ Industrial Visit)</td><td>Table Work/ Exercise Assigned (60 Marks)</td></tr>
<tr><td></td><td></td><td colspan="2">Total Marks : 100</td></tr>
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भाग - अ: परिचय		
कार्यक्रम: बी.सी.ए/बी.एस.सी/बी.बी.ए./बी.बी.ए. एफ.टी./बी.बी.ए. एच.ए. **कक्षा:** प्रथम वर्ष **सेमेस्टर:** प्रथम **सत्र:** जुलाई 2025-जून 2026		
विषय: Ability Enhancement Course (AEC) **Theory / Practical: Theory**		
1.	**Course Code**	**AEC - 101**
2.	**पाठ्यक्रम का शीर्षक**	हिन्दी भाषा और संस्कृति
3.	**पाठ्यक्रम का प्रकार:**	**Ability Enhancement Course (AEC)**
4.	**पूर्वापेक्षा (यदिकोईहो)**	कक्षा 12वीं उत्तीर्ण किसी भी विषय समूह से प्रमाणपत्र किया हो पात्र है
5	**पाठ्यक्रम के उद्देश्य**	**1:**विद्यार्थियों को भारतीय ज्ञान परंपरा और सांस्कृतिक विरासत से परिचित कराना। **2:**विद्यार्थियों को प्रमुख हिन्दी रचनाकारों और उनकी साहित्यिक कृतियों से अवगत कराना। **3:** भाषा, व्याकरण और शब्दावली की समझ विकसित करना ताकि सांस्कृतिक और साहित्यिक प्रशंसा (appreciation) हो सके। **4:**शास्त्रीय और आधुनिक ग्रंथों के माध्यम से आलोचनात्मक सोच और समझने की क्षमता बढ़ाना। **5:** संरचित भाषा अभ्यास के माध्यम से विद्यार्थियों को प्रतियोगी परीक्षाओं के लिए तैयार करना।

6	**पाठ्यक्रम की उपलब्धि (COs)**	**CO1:**विद्यार्थी भारतीय ज्ञान परम्परा से अवगत होने तथा उससे लाभान्वित होने में सक्षम होंगे। **CO2:**विद्यार्थी हिन्दी के प्रसिद्ध रचनाकारों एवं उनकी साहित्यिक रचनाओं से परिचित होने में सक्षम होंगे। **CO3:**विद्यार्थी भाषा, व्याकरण एवं शब्दावली का ज्ञान अर्जित कर सांस्कृतिक एवं साहित्यिक बोध विकसित करने में सक्षम होंगे। **CO4:**विद्यार्थी शास्त्रीय एवं आधुनिक रचनाओं के माध्यम से आलोचनात्मक सोच और समझ विकसित करने में सक्षम होंगे। **CO5:**विद्यार्थी प्रतियोगी परीक्षाओं हेतु आवश्यक भाषा और साहित्य का अभ्यास करने में सक्षम होंगे।	
7	**क्रेडिट**	**02**	
8	**कुल अंक**	**अधिकतम अंक: 100**	**न्यूनतम उत्तीर्ण अंक: 35**

भाग -ब: पाठ्यक्रम सामग्री		
प्रति सप्ताह कक्षाओं की संख्या :थ्योरी (02 घंटे प्रति सप्ताह)		
आवश्यक व्याख्यानों की कुल संख्या: थ्योरी (T): 30 घंटे		
इकाई	**विषय-सूची**	**व्याख्यानों की संख्या**
I	• भारतीय ज्ञान परम्परा: एक परिचय • भारतीय ज्ञान परम्परा में हिन्दी भाषा • महर्षि पाणिनि – जीवन व दर्शन **गतिविधियाँ:** • भारतीय ज्ञान परम्परा पर आधारित पोस्टर सृजन • भारतीय ज्ञान परम्परा से सम्बंधित ग्रंथों / पुस्तकों का अवलोकन	6
II	• मैथिलीशरण गुप्त: परिचय पाठ – मातृभूमि (कविता) • सूर्यकान्त त्रिपाठी 'निराला: परिचय पाठ – भारत वंदना (कविता) • प्रेमचन्द: परिचय पाठ – शतरंज के खिलाड़ी (कहानी) **गतिविधियाँ:** • कविता का सस्वर वाचन • कहानी वाचन	6
III	• वैचारिक – भारतीय भाषाओं में राम • आचार्य रामचन्द्र शुक्ल: परिचय पाठ: उत्साह (भाव मूलक निबन्ध) • रामधारी सिंह दिनकर: परिचय पाठ: भारत एक है (संस्कृति) लेख • शरद जोशी: परिचय	6

	पाठ: अफसर (व्यंग्य) **गतिविधियाँ:** • निबन्ध लेखन का अभ्यास • भारतीय संस्कृति पर आलेख लेखन	
IV	हिन्दी व्याकरण • शब्द रचना: उपसर्ग एवं प्रत्यय • शब्दप्रकार: तत्सम, तद्भव, देशज, विदेशी, संकर, नवनिर्मितशब्द • पर्यायवाची, विलोमार्थी, अनेक शब्द के लिए एक शब्द **गतिविधियाँ:** • शब्द रचना सम्बन्धी समूह चर्चा • देशज-विदेशी शब्दसूची बनाना	6
V	हिन्दीव्याकरण • हिन्दी के प्रमुख विराम चिह्न • संक्षेपण बीज शब्द – धर्म, अद्वैत, भाषा, अवधारणा **गतिविधियाँ :** • अनुच्छेद/ श्रुतलेख के माध्यम से विराम–चिह्नों का अभ्यास • संक्षेपण का अभ्यास	6

भाग - स: अध्ययन संसाधन
पाठ्य पुस्तकें, संदर्भ पुस्तकें और अन्य संसाधन
अनुशंसित पाठ्य सामग्री: 1. प्रेमचन्द – मानसरोवर खण्ड - 3 2. आचार्य रामचन्द्र शुक्ल – चिन्तामणि, भाग –1 3. शरद जोशी – "कहा जाता है" (व्यंग्य संग्रह) 4. डॉ. वासुदेव नन्दन प्रसाद: आधुनिक हिन्दी व्याकरण और रचना, भारती भवन, ठाकुर बाड़ी रोड, पटना, बिहार
पाठ्य पुस्तकें: 1. भारतीय ज्ञान परम्परा – विविध आयाम (संपादक: प्रो. सरोज शर्मा, शिप्रा प्रकाशन – नई दिल्ली) 2. प्राचीन भारतीय ज्ञान परम्परा (लेखक – डॉ. अच्युत कुमार रायोर, प्रकाशक – श्रीसाईनाथ, प्रकाशन – नागपुर)
संदर्भ पुस्तकें: 1. हिन्दी ज्ञानकोश
अनुशंसित डिजिटल प्लेटफॉर्म वेबलिंक • इंटरनेट सामग्री – टैग में उल्लिखित

भाग - द: अनुशंसित मूल्यांकन विधि		
केवल बाह्य मूल्यांकन		**Total Marks: 100**
बाह्य मूल्यांकन: अंत- सेमेस्टर परीक्षा **समय:** 02 घंटे	(अ) तीन अति लघु प्रश्न (प्रत्येक 50 शब्द) (ब) चार लघु प्रश्न (प्रत्येक 200 शब्द) (स) दो दीर्घ प्रश्न (प्रत्येक 500 शब्द)	**Marks:** 03×04 = 12 04×13 = 52 02×18 = 36 **कुल अंक: 100**
अधिकतम अंक:	**बाह्य मूल्यांकन:**100	
क्रेडिट मूल्य	02	
न्यूनतम उत्तीर्ण अंक	35	

PART-A : Introduction			
Programme : BCA	**Class : I Year**	**Semester : I**	**Session : July 2025-June 2026**
Subject : Computer Application		**Theory / Practical: Theory**	
1.	**Course Code**	SEC-101	
2.	**Course Title**	Digital Marketing	
3.	**Course Type**	SEC	
4.	**Pre-Requisite**	NIL	
5.	**Course Objectives**	1. To develop a comprehensive understanding of digital marketing concepts and tools. 2. To Integrate Indian cultural and traditional insights into digital marketing strategies. 3. To design and execute a real digital marketing campaign.	
6.	**Course Outcomes (COs)**	On successful completion of this course, the students will be able to: CO 1- Explain the concepts and tools of digital marketing. CO 2- Apply digital marketing strategies using Indian cultural and traditional insights. CO 3- Design and execute a digital marketing campaign. CO 4-Analyze the legal frame work and ethical responsibilities involved in digital marketing.	
7.	**Expected Job Role/career opportunities**	• Digital Marketing Executive/Specialist • SEO (Search Engine Optimization) Analyst • Social Media Manager/ Executive • Affiliate Marketing Coordinator • E-commerce Executive	
8.	**Credit Value**	**Theory-** 3 Credit	
9.	**Total Marks**	Max.Marks:100	Min. Passing Marks:35

PART B: Content of the Course (Theory)		
Total No. of Lectures: 15 Hrs.		
Unit	**Topics**	**No. of Lectures**
I	**Introduction to Digital Marketing:** Meaning, scope, and significance of digital marketing**;** Difference between digital and traditional marketing**;** Overview of digital marketing channels: SEO, SEM, Social Media, Email; Career opportunities in digital marketing**.** **Practical Activities-** • Students analyze different digital marketing channels(e.g., social media, search engines, email, display ads) and identify their advantages and disadvantages. • Students debate ethical issues indigital marketing, • Students will analyze Indian brands (e.g., Amul, Tanishq, Paper Boat, Fab India) that integrate traditional values with modern marketing approaches. • Group presentation or written report based on selected case.	18
II	**Customer Research: Digital Consumer Behavior:** Characteristics and factors affecting; Digital Marketing Strategy and Campaign Planning: Segmentation and targeting in the digital environment; **Practical Activity-** • List out various e-commerce apps/platforms. • Students will explore campaigns (e.g., Surf Excel's "Daag Acche Hain–Holi", Cadbury's Diwali campaigns) to study targeting, emotions, platform use, and outcomes. Comparative analysis and class discussion to be encouraged. • Choose a marketing-related topic (e.g., influencer marketing, consumer behaviour trends, and sustainability in branding). • Create engaging and informative content using simple tools like Canva or Google Docs.	15

III	**Legal & Ethical Issues in Digital Marketing:** Meaning of ethics in digital marketing, Importance of ethical behavior for brand image and customer trust; Data Protection Laws in India **Practical Activity-** • Students examine real or hypothetical digital ads and identify potential legal or ethical violations. • Role-play a scenario where a marketing team debates whether to use consumer data without consent.	12
Keywords/Tags: Digital Marketing, Content Marketing, Legal & Ethical Issues, Customer Research, Strategy, Technology		

Part C-Learning Resources
Text Books, Reference Books, Other resources
• Mathur, Vibha & Arora, Saloni. (2020). Digital Marketing. PHI Learning. • Babu KG Raja Sabarish, Anbazhagan B, Meenakumari S. (2023). Digital Marketing. Sultan Chand & Sons. • Swaminathan T. N. & Karthik Kumar. (2019). Digital Marketing: From Fundamentals to Future. Cengage India. • Chaffey, D. (2022). Digital marketing: Strategy, implementation and practice (8th ed.). Pearson. • Deiss, R., & Henneberry, R. (2020). Digital marketing for dummies (2nd ed.). Wiley. • Mahadevan, B. (2022). Textbook on Indian knowledge systems. Indian Institute of Management Bangalore. • The Readers Paradise. (2025). Indian knowledge system: Principles and practices.
Suggestive digital platforms weblinks: SWAYAM Course: Digital Marketing https://onlinecourses.swayam2.ac.in/ugc19_hs26/preview

Part D- Assessment and Evaluation		
Suggested Continuous Evaluation Methods:		
Internal Assessment: No Internal Assessment	Class Test Assignment/Presentation	Nil
External Assessment: University Exam Section: Time : 03.00 Hours	**Section (A):** Objective Type Questions	10 Marks
	Section (B): Short Questions (200 Words Each)	40 Marks
	Section (C): Long Questions (500 Words Each)	50 Marks
Any remarks/suggestions: Nil		

PART – A: Introduction			
Program: BBA/ BCA/ B. Sc. Class: I Year Year: I Semester: I Session: July 2025-June 26			
Subject: Project Work		**Theory / Practical: Practical**	
1	**Course Code**	PW/ Ap/ CE - 101	
2	**Course Title**	Project Work	
3	**Course Type (Core Course/DSE/Minor/MD-ID/SEC/VOC)**	Project Work (PW) PW/Ap/ CE	
4	**Pre-Requisite (if any)**	Open for all	
5	**Course Objectives**	1. To develop practical understanding of basic management and business concepts. 2. To enhance analytical and problem-solving skills through field or desk research. 3. To improve teamwork, communication, and presentation skills. 4. To familiarize students with local business practices and entrepreneurship. 5. To cultivate data collection, interpretation, and reporting skills.	
6	**Course Outcomes (CO)**	On completion of this course, learners will be able to: **CO1:** Students will be able to apply theoretical concepts to real-world business scenarios. **CO2:** Students will be able to demonstrate improved research and analytical skills using surveys, interviews, or observation. **CO3:** Students will be able to enhance team coordination and professional communication. **CO4:** Students will be able to gain exposure to local industries, markets, and entrepreneurial challenges. **CO5:** Students will be able to prepare structured reports and presentations effectively.	
7	**Credit Value**	Practical – 02 Credit	
8	**Total Marks**	**Max. Marks: 100**	**Min. Passing Marks: 35**

PART – B: Content of the Course	
No. of Lectures per week: Theory (02 Hours per week)	
Total No. of Lectures required: P: 60 Hours	
Topics	**No. of Lectures**
As part of the Skill Based Activity students are required to undertake Project Work. It is designed to provide practical exposure, industry orientation and application of classroom learning in real business scenarios. For this, students are required to: 1. Select an Industry/Organization - Identify a suitable industry or organization for undertaking the project work. 2. Observe Operations - Visit the organization to observe its operations, processes, and overall working environment. 3. Understand Organizational Structure - Interact with employees at various levels to comprehend the hierarchy and organizational structure. 4. Choose a Functional Area - Select a specific functional area (e.g. Marketing or Human Resources or Operations or Finance) for detailed study. 5. Collect and Analyze Data - Gather and analyze data related to the chosen area using both primary sources (interviews, discussions, surveys) and secondary sources (reports, websites, manuals). 6. Prepare and Present Report - Compile a comprehensive project report that includes the company profile, observations, data analysis, key learnings, and actionable recommendations.	**60**

Part C: Assessment and Evaluation	
Suggested Continuous Evaluation Method:	
External Assessment	**Marks**
Viva Voce on Practical (20 Marks)	100
Practical Record File (20 Marks)	
Table Work/Exercise Assigned (60 Marks)	
Total Marks: 100	

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ISO 9001:2015 Certified

Syllabus

Bachelor of Computer Applications

[BCA]

Year I / Semester II

w.e.f. Session 2025-26

Scheme No. 71, Gumasta Nagar, Indore-452009 Madhya Pradesh, Ph. : 0731-2780011, 2789925

Toll Free No. : 1800 233 2601 Website : www.svimi.org E-mail address : svimi@svimi.org

BCA II Semester (Course Details)				
Session : January – June 2026				
Sr. No.	**Course Type**	**Course Code**	**Subject Name**	**Total Credits**
1	Major - II (Core Course)	BCA – 201 (T)	Programming Methodology (Theory)	4
		BCA – 201 (P)	Programming Methodology (Practical)	2
2	Major - III (Core Course)	BCA – 202 (T)	Data Structures (Theory)	4
		BCA – 202 (P)	Data Structures (Practical)	2
3	Minor – II	BCA – 203 (T)	Operating System (Theory)	3
		BCA – 203 (P)	Operating System (Practical)	1
4	Ability Enhancement Course	AEC – 201	English Language and Indian Culture	2
5	Value Added Course	VAC – 201	भारत बोध (Understanding India)	2
			Total Credits	**20**

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PART-A : Introduction		
Programme : BCA	**Class : I Year**	**Semester : II**	**Session : January - June 2026**
Subject : Computer Application		**Theory / Practical: Theory**
1.	**Course Code**	BCA – 201 (T)
2.	**Course Title**	Programming Methodology (Theory)
3.	**Course Type (Core Course/DSE/Minor/MD-ID/SEC/VOC)**	Major – II (Core Course)
4.	**Pre-Requisite (if any)**	To study this course, a student must have basic knowledge of Computers.
5.	**Course Objectives**	1. To understand and appreciate the contributions of Indian scholars to the development of modern computing. 2. To familiarize students with the algorithms, flowcharts for problem solving. 3. To familiarize students with control statements for controlling data flow with iterations, array processing algorithms /programs. 4. To understand and apply object-oriented programming concepts by implementing various types of constructors and destructors, and by designing class hierarchies using different forms of inheritance. 5. To introduce students to the concept of recursion, pointers searching and sorting methods.
6.	**Course Outcomes (COs)**	On completion of this course, learners will be able to: CO1. Students will be able to describe key ancient and modern contributions of Indian scholars to modern computing. CO2. Develop simple algorithms and flow charts to solve a problem with programming using top down design principles. CO3. Learn to formulate iterative solutions and array processing algorithms for problems. CO4. Students will be able to implement constructors and destructors and design class hierarchies using appropriate inheritance techniques in object-oriented programs. CO5. Use recursive techniques, pointers and searching methods in programming.
7.	**Expected Job Role / Career Opportunities**	• Web Developer • Software Testing and Quality Analyst • Technical Support Engineer • IT Support and Maintenance Executive

8.	**Credit Value**	**Theory –** 4 Credits	
9.	**Total Marks**	**Max. Marks:** 100	**Min. Passing Marks:** 35

PART B: Content of the Course		
No. of Lectures (in hours per week): 2 Hrs. per week		
Total No. of Lectures: 60 Hrs.		
UNIT	**TOPICS**	**No. of Lectures**
I	**Indian Knowledge System:** Ancient Indian Contribution: Brahmagupta "Chakravala method", Aryabhata Algorithm. The Panini Grammar System (Ashtadhyayi). Modern Contribution: Origin of Julia Programming Language, Indian Scientist who designed new programming languages and open source languages.	**02**
	Suggested Activities: Discuss how Panini's grammar rules resemble formal grammar in programming languages, Aryabhata Algorithm.	
II	**Introduction to Programming:** Program Concept, Characteristics of Programming, Stages in Program Development, Algorithms, Notations, Design, Flowcharts, Types of Programming Methodologies. **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. **Conditional Statements:** if construct, switch-case construct. **Iterative Statements:** while, do-while, and for loops, use of break and continue in loops, Using Nested Statements (Conditional as well as Iterative).	**12**
	Suggested Activities: Implement a console-based quiz using formatted I/O, Use flowcharts and pseudocode tools to map variable types and memory usage	
III	**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.	**10**
IV	**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	**12**

	of Objects, Object as Function Arguments, Friend Functions, Virtual functions, Returning Objects, Constant member functions, Pointer to Members, Local Classes.	
	Suggested Activities: Combine all the modules to create a comprehensive Library Management System with features like adding books, managing users, calculating late fees, and tracking library statistics. Design a Simple Banking System in C++.	
V	**Constructor & Destructor**: Constructor, Parameterized Constructor, Multiple Constructors in a Class, Constructors with Default Arguments, Dynamic Initialization of Objects, Copy Constructor, Dynamic Constructor and Destructor. **Inheritance:** Defining Derived Classes, Single Inheritance, Making a Private Member Inheritable, Multilevel Inheritance, Hierarchical Inheritance, Multiple Inheritance, Hybrid Inheritance.	**12**
	Suggested Activities: Building a Simple Student Management System, Designing a Vehicle Management System. Implement dynamic memory allocation for managing multiple vehicles.	
VI	**Various types of Classes:** 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.	**12**
	Suggested Activities: Create a Shape Management System to manage different geometric shapes like Circle, Rectangle, and Triangle. Develop a Payroll System for managing employee salaries.	

PART C: Learning Resources
Textbooks, Reference Books, Other Resources
Suggested Readings:
Textbooks: 1. Gerard G. Emch, R. Sridharan, M. D. Srinivas: Contributions to the History of Indian Mathematics, Hindustan Book Agency, Vol. 3, 2005. 2. Udayan S. Patankar & Sunil M. Patankar: Elements of Vedic Mathematics, TTU Press, Tallinn 2018. 3. J. R. Hanly and E. B. Koffman, "Problem Solving and Program Design in C", Pearson, 2015. 4. E. Balguruswamy, "C++ ", TMH Publication ISBN O-07-462038-X 5. Herbert Shildt, "C++ The Complete Reference "TMH Publication ISBN 0-07-463880-7. 6. मध्य प्रदेश हिन्दी ग्रंथ अकादमी की पुस्तकें । **Reference Books:** 1. R. Lafore, 'Object Oriented Programming C++" 2. N. Dale and C. Weems, "Programming and problem solving with C++: brief edition", Jones & Bartlett Learning.
Suggestive Digital Platform Web Links: https://www.eshiksha.mp.gov.in/mpdhe
Suggested Equivalent Online Courses: https://nptel.ac.in/courses/106/105/106105151/ https://nptel.ac.in/courses/106/105/106105234/

Part D: Assessment and Evaluation		
Suggested Continuous Evaluation Methods: Maximum Marks: 100 Marks Continuous Comprehensive Evaluation (CCE): 30 Marks University Exam (UE): 70 Marks		
Internal Assessment Continuous Comprehensive Evaluation (CCE)		**Total Marks :** 30
External Assessment University Exam Section Time: 03.00 hours.	**Section (A)** : Very Short Questions **Section (B)** : Short Questions **Section (C)** : Long Questions	**Total Marks :** 70

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PART-A : Introduction		
Programme : BCA Class : I Year Semester : II Session : January - June 2026		
Subject : Computer Application		**Theory / Practical: Practical**
1.	**Course Code**	BCA – 201 (P)
2.	**Course Title**	Programming Methodology (Practical)
3.	**Course Type**	Major – II (Core Course)
4.	**Pre-Requisite**	To study this course, a student must have basic knowledge of Computers.
5.	**Course Objectives**	1. To develop problem-solving skills by formulating problems and designing appropriate algorithms and flowcharts. 2. To build proficiency in C++ programming fundamentals including variables, control structures, functions, recursion, and arrays. 3. To apply object-oriented programming concepts such as classes, constructors, function overloading, and inheritance in program design. 4. To strengthen logical thinking through implementation of mathematical, string, and matrix-based programs. 5. To enhance debugging, testing, and program execution skills by validating outputs for different problem scenarios.
6.	**Course Outcomes (COs)**	On completion of this course, learners will be able to: CO1. Analyze problems and develop appropriate algorithms and flowcharts before coding solutions. CO2. Write, compile, and execute C++ programs using control structures, loops, functions, recursion, and arrays. CO3. Implement object-oriented programming concepts such as classes, constructors, member functions, and inheritance. CO4. Solve mathematical, logical, and string-based problems. CO5. Test, debug and validate programs effectively to ensure correctness for different input cases.

7.	**Expected Job Role / Career Opportunities**	• Software Developer / Engineer • Database Developer • Data Analyst • Technical Consultant / IT Support Engineer	
8.	**Credit Value**	**Practical –** 2 Credits	
9.	**Total Marks**	**Max. Marks:** 100	**Min. Passing Marks:** 35

PART B: Content of the Course	
No. of Lab Practical's (in hours per week): 1 hours per week	
Total No. of Lab.: 30 Hrs.	
Suggestive list of Practical's	**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 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	30 Hrs.

two time objects in hours, minutes and seconds. 20. Write a program to implement single inheritance.	

Part C-Learning Resources
Text Books, Reference Books, Other resources
Suggested Readings:
Textbooks: 1. Gerard G. Emch, R. Sridharan, M. D. Srinivas: Contributions to the History of Indian Mathematics, Hindustan Book Agency, Vol. 3, 2005. 2. Udayan S. Patankar & Sunil M. Patankar: Elements of Vedic Mathematics, TTU Press, Tallinn 2018. 3. J. R. Hanly and E. B. Koffman, "Problem Solving and Program Design in C", Pearson, 2015 4. E. Balguruswamy, "C++ ", TMH Publication ISBN O-07-462038-X 5. Herbert Shildt, "C++ The Complete Reference "TMH Publication ISBN 0-07-463880-7. 6. मध्य प्रदेश हिन्दी ग्रंथ अकादमी की पुस्तकें । **Reference Books:** 1. R. Lafore, 'Object Oriented Programming C++" 2. N. Dale and C. Weems, "Programming and problem solving with C++: brief edition", Jones & Bartlett Learning.
Suggestive Digital Platform Web Links: https://www.eshiksha.mp.gov.in/mpdhe
Suggested Equivalent Online Courses: https://nptel.ac.in/courses/106/105/106105151/ https://nptel.ac.in/courses/106/105/106105234/

Part D- Assessment and Evaluation			
Suggested Continuous Evaluation Methods:			
Internal Assessment	**Marks**	**External Assessment**	**Marks**
Class Interaction/Quiz		Viva voce practical	
Attendance		Practical record file	
Assignments (Charts/ Model/Seminar/Rural Services/ Technology Dissemination/Report of Excursion/Lab visit/ Survey/Industrial Visit)		Table work/Experiment	
Total	**30**		**70**

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UGC-NAAC Accredited 'A' Grade Institute
ISO 9001:2015 Certified

PART-A : Introduction		
Programme : BCA **Class : I Year** **Semester : II** **Session : January - June 2026**		
Subject : Computer Application		**Theory / Practical: Theory**
1.	**Course Code**	BCA – 202 (T)
2.	**Course Title**	Data Structures (Theory)
3.	**Course Type**	Major – III (Core Course)
4.	**Pre-Requisite**	To study this course, a student must have basic knowledge of Computers.
5.	**Course Objectives**	1. To recognize the connection between ancient Indian knowledge systems and modern data structures. 2. To understand fundamental data structures, algorithm design concepts and array representations for efficient problem solving. 3. To understand and implement linear data structures such as stacks, queues, and linked lists along with their operations and applications for efficient data handling. 4. To understand tree and heap data structures, their representations, properties, and traversal techniques for efficient data organization and manipulation. 5. To learn the fundamentals of graphs and hashing, including their representations, traversal methods, and efficient data storage and retrieval techniques. 6. To understand and apply sorting algorithms and search tree structures for efficient data organization and retrieval.
6.	**Course Outcomes (COs)**	On completion of this course, learners will be able to: CO1. Know the contributions of Indians in the field of programming and data structures. CO2. Understand basic data structure concepts, analyze algorithms and implement different array representations for efficient data organization. CO3. Implement and apply stacks, queues, and linked lists using array and linked representations to solve computational problems efficiently. CO4. Represent, traverse and manipulate trees and heaps using array and linked implementations for efficient data management.

		CO5. Implement and apply graph and hashing techniques for efficient data representation, searching, and storage. CO6. Represent, traverse and search graphs and implement hashing techniques for efficient data storage and retrieval.	
7.	**Expected Job Role / Career Opportunities**	• Software Developer / Engineer • Database Developer • Data Analyst • Technical Consultant / IT Support Engineer	
8.	**Credit Value**	**Theory –** 4 Credits	
9.	**Total Marks**	**Max. Marks:** 100	**Min. Passing Marks:** 35

PART B: Content of the Course		
No. of Lectures (in hours per week): 2 Hrs. per week		
Total No. of Lectures: 60 Hrs.		
Unit	**Topics**	**No. of Lectures**
I	**UNIT I Indian Knowledge System:** Resemblance of efficient Sorting & Searching techniques with Ancient Indian classification methods in Ayurveda & Sanskrit texts. The Buddhist Numerical Sorting Method (Bhāskara II). Indian contribution in Data Structure: Dr. Sartaj Sahni, Dr. Arvind, R. K. Gupta.	02
	Suggested Activities: Vedic Sorting Implementation: Develop a sorting algorithm inspired by Ayurvedic classification techniques. Study the resemblance of temple architecture to graph connectivity and model it using Graphviz/Network.	
II	**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.	10
	Suggested Activities: Implementing a Simple To-Do List using Linear Data Structures, Exploring Non-Linear Data Structures with a Family Tree, Sparse Matrix Operations Using Arrays.	

III	**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. **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.	14
	Suggested Activities: Express Calculator Using Stacks, Queue Simulation for a Bank System, Linked List-Based Music Playlist, Compare linked list pointer-based structure with ancient manuscript referencing, Develop a queue system (FIFO) for handling real-world ticket processing.	
IV	**Trees:** Representation of Trees, Binary tree, Properties of Binary Trees, Binary Tree Representations- Array and Linked Representations, Binary Tree Traversals, Threaded Binary Trees. **Heap:** Definition, Insertion, Deletion.	12
	Suggested Activities: Create efficient storage models for Ayurveda medicinal 12 records using tree-based structures. Research how Vedic knowledge management compares with modern database indexing, Implement tree traversal to simulate genealogy in Vedic lineage texts, Implement heap sorting for priority based Ayurveda classification.	
V	**Graphs:** Graph ADT, Graph Representations, Graph Traversals, Searching. **Hashing:** Introduction, Hash tables, Hash functions, Overflow Handling.	10
	Suggested Activities: Model Indian temple network connectivity using graph algorithms, Social Network Graph Simulation, Implementing a Hash Map, Graph Based Maze Solver.	
VI	**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.	12
	Suggested Activities: Students compete to optimize sorting algorithms based on Ayurvedic classification techniques, Use	

	binary trees to model ancient Indian lineage systems.	

Part C-Learning Resources
Text Books, Reference Books, Other resources
Suggested Readings:
Textbooks: 1. Gerard G. Emch, R. Sridharan, M. D. Srinivas: Contributions to the History of Indian Mathematics, Hindustan Book Agency, Vol. 3, 2005. 2. Udayan S. Patankar & Sunil M. Patankar: Elements of Vedic Mathematics, TTU Press, Tallinn 2018. 3. Sartaj Sahani, "Data Structures, Algorithms and Applications with C++", McGraw Hill. 4. Robert L. Kruse, "Data Structures and Program Design in C++", Pearson. 5. D. S. Malik, "Data Structure using C++", Second edition, Cengage Learning. 6. मध्य प्रदेश हिन्दी ग्रंथ अकादमी की पुस्तकें । **Reference Books:** 1. Adam Drozdek, "Data Structures and algorithm in C++", Third Edition, Cengage Learning. 2. M. A. Weiss, "Data structures and Algorithm Analysis in C", 2nd edition, Pearson. 3. Lipschutz, "Schaum's outline series Data structures", Tata McGraw-Hill.
Suggestive digital platforms weblinks: https://www.eshiksha.mp.gov.in/mpdhe https://epgp.inflibnet.ac.in
Suggested Equivalent Online Courses: https://nptel.ac.in/courses/106/102/106102064/ https://nptel.ac.in/courses/106/106/106106127/ https://nptel.ac.in/courses/106/105/106105085/

Part D: Assessment and Evaluation		
Suggested Continuous Evaluation Methods: Maximum Marks: 100 Marks Continuous Comprehensive Evaluation (CCE): 30 Marks University Exam (UE): 70 Marks		
Internal Assessment Continuous Comprehensive Evaluation (CCE)		**Total Marks :** 30
External Assessment University Exam Section Time: 03.00 hours.	**Section (A)** : Very Short Questions **Section (B)** : Short Questions **Section (C)** : Long Questions	**Total Marks :** 70

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PART-A : Introduction		
Programme : BCA **Class : I Year** **Semester : II** **Session : January - June 2026**		
Subject : Computer Application		**Theory / Practical: Practical**
1.	**Course Code**	BCA – 202 (P)
2.	**Course Title**	Data Structures (Practical)
3.	**Course Type**	Major – III (Core Course)
4.	**Pre-Requisite**	To study this course, a student must have basic knowledge of Computers.
5.	**Course Objectives**	1. To understand fundamental data structures, algorithm design concepts and array representations for efficient problem solving. 2. To understand and implement linear data structures such as stacks, queues, and linked lists along with their operations and applications for efficient data handling. 3. To understand tree and heap data structures, their representations, properties, and traversal techniques for efficient data organization and manipulation. 4. To learn the fundamentals of graphs and hashing, including their representations, traversal methods, and efficient data storage and retrieval techniques. 5. To understand and apply sorting algorithms and search tree structures for efficient data organization and retrieval.
6.	**Course Outcomes (COs)**	On completion of this course, learners will be able to: CO1. Understand basic data structure concepts, analyze algorithms and implement different array representations for efficient data organization. CO2. Implement and apply stacks, queues, and linked lists using array and linked representations to solve computational problems efficiently. CO3. Represent, traverse and manipulate trees and heaps using array and linked implementations for efficient data management. CO4. Implement and apply graph and hashing techniques for efficient data representation, searching, and storage. CO5. Represent, traverse and search graphs and implement hashing techniques for efficient data

		storage and retrieval.	
7.	**Expected Job Role / Career Opportunities**	• Software Developer / Engineer • Database Developer • Data Analyst • Technical Consultant / IT Support Engineer	
8.	**Credit Value**	**Practical –** 2 Credits	
9.	**Total Marks**	**Max. Marks:** 100	**Min. Passing Marks:** 35

PART B: Content of the Course	
No. of Lab Practical's (in hours per week): 1 hours per week	
Total No. of Lab.: 30 Hrs.	
Suggestive list of Practical's	**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 find largest element from an array. 2. Write a program to implement push and pop operations on a stack using array. 3. Write a program to perform insert and delete operations on a queue using array. 4. Write a program for Linear search. 5. Write a program for Binary search. 6. Write a program for Bubble sort. 7. Write a program for Selection sort. 8. Write a program for Quick sort. 9. Write a program for Insertion sort. 10. Write a program to implement linked list.	30 Hrs.

Part C-Learning Resources
Text Books, Reference Books, Other resources
Suggested Readings:
Textbooks: 1. Gerard G. Emch, R. Sridharan, M. D. Srinivas: Contributions to the History of Indian Mathematics, Hindustan Book Agency, Vol. 3, 2005. 2. Udayan S. Patankar & Sunil M. Patankar: Elements of Vedic Mathematics, TTU Press, Tallinn 2018. 3. Sartaj Sahani, "Data Structures, Algorithms and Applications with C++", McGraw Hill. 4. Robert L. Kruse, "Data Structures and Program Design in C++", Pearson. 5. D. S. Malik, "Data Structure using C++", Second edition, Cengage Learning. 6. मध्य प्रदेश हिन्दी ग्रंथ अकादमी की पुस्तकें । **Reference Books:** 1. Adam Drozdek, "Data Structures and algorithm in C++", Third Edition, Cengage Learning. 2. M. A. Weiss, "Data structures and Algorithm Analysis in C", 2nd edition, Pearson. 3. Lipschutz, "Schaum's outline series Data structures", Tata McGraw-Hill.
Suggestive digital platforms weblinks: https://www.eshiksha.mp.gov.in/mpdhe https://epgp.inflibnet.ac.in
Suggested Equivalent Online Courses: https://nptel.ac.in/courses/106/102/106102064/ https://nptel.ac.in/courses/106/106/106106127/ https://nptel.ac.in/courses/106/105/106105085/

Part D- Assessment and Evaluation			
Suggested Continuous Evaluation Methods:			
Internal Assessment	**Marks**	**External Assessment**	**Marks**
Class Interaction/Quiz		Viva voce practical	
Attendance		Practical record file	
Assignments (Charts/ Model/Seminar/Rural Services/ Technology Dissemination/Report of Excursion/Lab visit/ Survey/Industrial Visit)		Table work/Experiment	
Total	**30**		**70**

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PART-A : Introduction		
Programme : BCA	**Class : I Year**	**Semester : II** **Session : January - June 2026**
Subject : Computer Application		**Theory / Practical: Theory**
1.	**Course Code**	BCA – 203 (T)
2.	**Course Title**	Operating System (Theory)
3.	**Course Type**	Minor II
4.	**Pre-Requisite**	To study this course, a student must have basic knowledge of computers
5.	**Course Objectives**	1. To grasp the structure, components, services, and evolution of operating systems. 2. To learn about processes, threads, creation, scheduling algorithms, synchronization and classic problems. 3. To study techniques for main memory (paging, segmentation) and virtual memory (page replacement algorithms). 4 To understand file system structures, disk scheduling, and input/output device management. 5. To learn methods for preventing, avoiding, detecting, and recovering from deadlocks. 6. To gain knowledge of OS security principles and mechanisms.
6.	**Course Outcomes (COs)**	On completion of this course, learners will be able to: CO1. Understand the basic structure, components, services, and evolution of operating systems. CO2. Apply concepts of processes, threads, CPU scheduling, and synchronization to solve classic OS problems. CO3. Analyze and use memory management techniques including paging, segmentation, and virtual memory algorithms. CO4. Explain file system organization, disk scheduling methods, and I/O management techniques. CO5. Identify and apply methods for deadlock prevention, avoidance, detection, and recovery. CO6. Understand fundamental operating system security principles and protection mechanisms.
7.	**Expected Job Role / Career Opportunities**	• Software Developer / Programmer • Operating System Engineer • Technical Support Engineer • Kernel Developer

8.	**Credit Value**	**Theory-** 3 Credits	
9.	**Total Marks**	**Max. Marks:** 100	**Min. Passing Marks:** 35

PART B: Content of the Course		
No. of Lectures (in hours per week): 2 Hrs. per week		
Total No. of Lectures: 45 Hrs.		
Unit	**Topics**	**No. of Lectures**
I	**Indian Knowledge System**— The BOSS operating system, open source software's, growth of LINUX, Aryabhatt Linux, contributions of innovators - Rajen Sheth, Sunder Pichai etc. **Suggested Activities:** Aryabhatt Linux Coding Sprint , Open Source Innovation Hackathon.	02
II	**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, Time Sharing Systems, Distributed OS, Real time systems. Operating System for Personal Computers, Workstations and Hand-held Devices, Process control & Real time Systems. **Process Management**: Process Concepts, Process states & Process Control Block. **Process Scheduling**: Scheduling Criteria, Scheduling Algorithms (Preemptive & Non- Preem tive FCFS, SJF, SRTN, RR, Priority Multiple-Processor, Real-Time, Multilevel Queue and Multilevel Feedback Queue Scheduling **Deadlock** - Definition, Deadlock Characterization, Necessary and Sufficient Conditions for Deadlock. **Suggested Activities:** OS Evolution Timeline, OS Simulator Challenge, Process Scheduling Debate, Deadlock Detection Lab, Real –Time OS Case Study, OS Simulation with Deadlock Avoidance.	15
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,	15

	Acyclic-Graph, General Graph), Allocation Methods (Contiguous, Linked, Indexed) **Disk Management**: Structure, Disk Scheduling Algorithms (FCFS, SSTF, SCAN, C-SCAN, LOOK), swap space Management, Disk Reliability, Recovery.	
	Suggested Activities: Memory Management, Simulator, File System Design Challenge , Disk Scheduling , Algorithm Race , Virtual Memory Management Simulation , Disk Management Case Study , File System Forensics Lab.	
IV	**LINUX:** Introduction, History and features of Linux, advantages, hardware requirements for installation, Linux architecture, file system of Linux - boot block, super block, inode table, and 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.	13
	Suggested Activities: Linux OS Architecture Poster, Linux system Installation Lab Linux File System Exploration CLI vs GUI Challenge, Linux kernel Deep Dive, Open Source Software Debate.	

Part C-Learning Resources
Text Books, Reference Books, Other resources
Textbooks: 1.A Silberschatz, P.B. Galvin, G. Gagne, Operating Systems Concepts, 8th Edition, John Wiley Publications. 2.A.S. Tanenbaum, Modern Operating Systems, 3rd Edition, Pearson Education. 3.Operating System by Peterson Linux. 4. मध्य प्रदेश हिन्दी ग्रंथ अकादमी की पुस्तकें । **Reference Books:** 1. G. Nutt, Operating Systems: A Modern Perspective, 2nd Edition Pearson Education. 2. W. Stallings, Operating Systems, Internals & Design Principles, 8th Edition, Pearson Education. 3. M. Milenkovic, Operating Systems- Concepts and design, Tata McGraw Hill. E 4. Operating System design and Concepts by Milan Milenkovic.
Suggestive Digital Platform Web Links: https://www.eshiksha.mp.gov.in/mpdhe https://epgp.inflibnet.ac.in **Suggested Equivalent Online Courses:** https://nptel.ac.in/courses/106/102/106102132/

Part D: Assessment and Evaluation		
Suggested Continuous Evaluation Methods: Maximum Marks: 100 Marks Continuous Comprehensive Evaluation (CCE): 30 Marks University Exam (UE): 70 Marks		
Internal Assessment Continuous Comprehensive Evaluation (CCE)		**Total Marks :** 30
External Assessment University Exam Section Time: 03.00 hours.	**Section (A)** : Very Short Questions **Section (B)** : Short Questions **Section (C)** : Long Questions	**Total Marks :** 70

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PART-A : Introduction			
Programme : BCA	**Class : I Year**	**Semester : II**	**Session : January - June 2026**
Subject : Computer Application		**Theory / Practical: Practical**	
1.	**Course Code**	BCA – 203 (P)	
2.	**Course Title**	Operating System (Practical)	
3.	**Course Type**	Minor II	
4.	**Pre-Requisite**	To study this course, a student must have basic knowledge of computers	
5.	**Course Objectives**	1. To grasp the structure, components, services, and evolution of operating systems. 2. To learn about processes, threads, creation, scheduling algorithms, synchronization and classic problems. 3. To study techniques for main memory (paging, segmentation) and virtual memory (page replacement algorithms). 4. To understand file system structures, disk scheduling, and input/output device management. 5. To learn methods for preventing, avoiding, detecting, and recovering from deadlocks.	
6.	**Course Outcomes (COs)**	On completion of this course, learners will be able to: CO1. Understand the basic structure, components, services, and evolution of operating systems. CO2. Apply concepts of processes, threads, CPU scheduling, and synchronization to solve classic OS problems. CO3. Analyze and use memory management techniques including paging, segmentation, and virtual memory algorithms. CO4. Explain file system organization, disk scheduling methods, and I/O management techniques. CO5. Identify and apply methods for deadlock prevention, avoidance, detection, and recovery.	
7.	**Expected Job Role / Career Opportunities**	• Software Developer / Programmer • Operating System Engineer • Technical Support Engineer • Kernel Developer	
8.	**Credit Value**	**Practical-** 1 Credit	
9.	**Total Marks**	**Max. Marks:** 100	**Min. Passing Marks:** 35

PART B: Content of the Course	
No. of Lab Practical's (in hours per week): 1 hours per week	
Total No. of Lab.: 15 Hrs	
Suggestive list of Practical's	**No. of Labs**
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, ank, undo	15 Hrs.

PART C: Learning Resources
Textbooks, Reference Books, Other Resources
Suggested Readings:
Textbooks: 1. A Silberschatz, P.B. Galvin, G. Gagne, Operating Systems Concepts, 8th Edition, John Wiley Publications. 2. A.S. Tanenbaum, Modern Operating Systems, 3rd Edition, Pearson Education. 3. Operating System by Peterson. 4. मध्य प्रदेश हिन्दी ग्रंथ अकादमी की पुस्तकें। **Reference Books:** 1. G. Nutt, Operating Systems: A Modern Perspective, 2nd Edition Pearson Education. 2. W. Stallings, Operating Systems, Internals & Design Principles, 8th Edition, Pearson Education. 3. M. Milenkovic, Operating Systems- Concepts and design, Tata McGraw Hill. 4. Operating System design and Concepts by Milan Milenkovic.
Suggestive Digital Platform Web Links: https://www.eshiksha.mp.gov.in/mpdhe https://epgp.inflibnet.ac.in **Suggested Equivalent Online Courses:** https://nptel.ac.in/courses/106/102/106102132/

Part D- Assessment and Evaluation			
Suggested Continuous Evaluation Methods:			
Internal Assessment	**Marks**	**External Assessment**	**Marks**
Class Interaction/Quiz		Viva voce practical	
Attendance		Practical record file	
Assignments (Charts/ Model/Seminar/Rural Services/ Technology Dissemination/Report of Excursion/Lab visit/ Survey/Industrial Visit)		Table work/Experiment	
Total	**30**		**70**

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PART-A : Introduction			
Programme : B.Sc./BCA/BBA /BBA FT/BBA HA			
Class : I Year	**Semester : II**	**Session : January - June 2026**	
Subject : Ability Enhancement Course		**Theory / Practical: Theory**	
1.	**Course Code**	AEC – 201	
2.	**Course Title**	English Language and Indian Culture	
3.	**Course Type**	Ability Enhancement Course	
4.	**Pre-Requisite**	Not Required	
5.	**Course Objectives**	1. To imbibe values which make students aware of national heritage and making them responsible citizens. 2. To critically read texts to identify main ideas, infer meanings, and assess the author's purpose. 3. To use grammar and vocabulary effectively for communication. 4. To write appropriate correspondence and reports for various professional and social contexts. 5. To prepare students for various competitive exams by developing English Language competence.	
6.	**Course Outcomes (COs)**	On completion of this course, learners will be able to: CO1. Imbibe values which make them aware of national heritage and making them responsible citizens. CO2. Critically read texts to identify main ideas, infer meanings, and assess the author's purpose. CO3. Use grammar and vocabulary effectively for communication. CO4. Write appropriate correspondence and reports for various professional and social contexts. CO5. Prepare for various competitive exams by developing their English Language competence.	
7.	**Expected Job Role/career opportunities**	• Content Writer • Copy Editor • Proofreader • Corporate Communication Executive • Customer Relationship Executive	
8.	**Credit Value**	**Theory –** 2 Credits	
9.	**Total Marks**	**Max. Marks:** 100	**Min. Passing Marks:** 35

PART B: Content of the Course (Theory)		
Total No. of Lectures: 30 Hrs.		
Unit	**Topics**	**No. of Lectures**
I	**Understanding Indian Culture** 1. Rabindranath Tagore "Where the mind is without fear" 2. Swami Vivekananda - "Chicago Speech (1893)" 3. R. K. Narayan - "Astrologer's Day" 4. Introduction to Sundarkand of Valmiki's Ramayan 5. A.L Basham: "The wonder that was India" (an excerpt) **Keywords**: Heritage, Diversity, Pluralism, Values, Patriotism, Spirituality, Humanism, Social Harmony, Tradition, Modernity. **Activity:** • Group Discussion on theme - "fearless thinking & nationalism" (Tagore), "religious harmony & tolerance" (Vivekananda), "social observations" (R.K. Narayan). • Creative Expression-Poster or Collage on "What Indian culture means to me," • A short presentation on a specific cultural aspect of the students' home state (e.g., a festival, a craft, a local custom).	12
II	**Comprehension Skills** 1. Reading Techniques: Skimming, Scanning 2. Identifying the Main Idea and Theme 3. Making Inferences and Drawing Conclusions 4. Analysing unseen passages on Indian history, society, and art. **Keywords** - Inference, Main Idea, Theme, Tone, Purpose, Context Clues, Summary, Paraphrasing, Critical Reading **Activity:** • Worksheets with unseen passages followed by questions on comprehension, vocabulary, and inference. • Summarizing articles from newspapers or magazines on cultural or social issues in India.	02

III	**Basic Language Skills** **Grammar:** 1. Parts of Speech 2. Articles 3. Subject-Verb Agreement 4. Tenses and their application **Vocabulary:** 1. Synonyms, Antonyms, Homonyms, and Homophones 2. One-word substitutes 3. Word formation: Suffixes and Prefixes **Keywords**-Tense, Agreement, Clause, Phrase, Synonym, Antonym, Prefix, Suffix. **Activity:** • Grammar exercises (fill-in-the-blanks, error correction, sentence transformation). • Vocabulary-building games and quizzes.	08
IV	**Writing Skills** 1. The Writing Process: Pre-writing, Drafting, Revising, and Editing 2. Paragraph Writing: Structure, Topic Sentence, and Coherence. 3. Letter writing: Formal/Informal **Keywords:** Cohesion, Coherence, Topic Sentence, Drafting, Revising. Editing **Activity:** • Paragraph on given topics (e.g., "My Favourite Indian Festival," or "The Importance of Technology in Modern India"). • Letter/Application writing exercises • Essay Writing on contemporary relevant issues.	04
V	**Situational Conversation-Context, Audience, Purpose, Type, Register** 1. Meeting/Greeting - Introducing Self, Introducing people to one another 2. Apologies/Responses 3. Enquiring about a Course/ Requesting Information 4. Agreeing/Disagreeing (with a Proposal) **Keywords** - Register, Tone, Style, Audience, Purpose,-Context, Etiquette, Persuasion.	04

	Activity: • Introducing and Greeting (e.g., formal business meeting, college orientation, conference with a guest speaker, informal club gathering). • Debate-Agreeing & Disagreeing with Proposals - such as: "The college should make attendance optional for lectures."	

Part C-Learning Resources
Text Books, Reference Books, Other resources
1. Tagore,R (1912). Gitanjali (Song Offerings). London: Macmillan. "Where the Mind is Without Fear" is Poem No. 35 in this collection. 2. Complete Works of Swami Vivekananda. Vol. 1. Advaita Ashrama (Publication Department of Ramakrishna Math, Belur Math, Kolkata). 3. Swami Tapasyananda, Sundarkandam of Srimad Valmiki Ramayana, Sri ram Krishna Math, Madras 4. Narayan, R.K. Malgudi Days. Indian Thought Publications; Ist edition (11 December 2019); ISBN-10: 9788185986173 5. Cultural Heritage of India by S. Radhakrishnan & Haridas Bhattacharyya (ed.) 6. A Course in English Grammar and Composition by Geetha Nagaraj 7. Functional English by Dr. P. Kiranmai Duit & Geetha Rajeevan (Foundation Books/Cambridge India) 8. Communicative English by E. Suresh Kumar, P. Srechari, and J. Savithri (Orient Black Swan) 9. Practical English Usage by Michael Swan (Oxford) 10. Modern English Grammar by N.Krishnaswany, Macmillion Publication 11. Developing Reading Skills: A Practical Guide to Reading Comprehension Exercises" by Francoise Grellet (Cambridge) 12. Writing Skills by Norman Coe, Robin Rycroft & Pauline Ernest (Cambridge)
Suggested Equivalent Online Course 1. NPTEL Course-"Communication Skills" (by IIT Kharagpur) https://nptel.ac.in/courses/109/106/109106175/ 2. Swayam Course - "English Language for Competitive https://onlinecourses.nptel.ac.in/noc23_hs51/preview Exargs" (by IIT Madras 3. British Council India - "Learn English: Speaking and Writing Skills" https://www.britishcouncil.in/english/courses-adults/learnonline 4. Coursera "Write Professional Emails in English" (by Georgia Tech) https://www.coursera.org/learn/professional-emails-english

Part D- Assessment and Evaluation		
Suggested Continuous Evaluation Methods: Maximum Marks : 100 Marks		
External Assessment: University Exam Section: Time : 03.00 Hours	**Section (A):** Very Short Questions (50 Words)	5*4=20
	Section (B): Short Questions (200 Words)	5*10=50
	Section (C): Long Questions (500 Words)	2*15=30

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PART – A: Introduction			
Programme: B.Sc./BCA/BBA /BBA FT/BBA HA **Class: I Year**		**Semester: II**	**January-June 2026**
Subject: Value Added Course (VAC)		**Theory / Practical: Theory**	
1.	**Course Code**	VAC – 201	
2.	**Course Title**	भारत बोध (Understanding India)	
3.	**Course Type (Core Course/DSE/Minor/MD-ID/SEC/VOC)**	VAC	
4.	**Pre-Requisite (if any)**	Class 12th Pass	
5.	**Course Objectives**	1. To develop a fundamental understanding of India's historical, cultural, and Constitutional Nature (Sanvidhanik Swaroop). 2. To develop awareness among students towards the Indian education system, the tradition of knowledge, and national values. 3. To help students understand the India's independence movement, democratic development, and global role. 4. To make students responsible citizens by providing knowledge of the rights and duties enshrined in the Constitution.	
6.	**Course Outcomes (COs)**	On completion of the course, learners will be able to: CO1. Develop a fundamental understanding of India's historical, cultural, and social diversity. CO2. Develop awareness towards the Indian knowledge tradition and national values. CO3. Understand the India's independence movement, development journey, and global role. CO4. Become responsible citizens by acquiring knowledge of the rights and duties enshrined in the Constitution.	
7.	**Expected Job Role / Career Opportunities**	• Civil service candidates • Social workers • Journalists/media professionals • Counselors/motivational trainers • Legal assistants	
8.	**Credit Value**	2 Credits	
9.	**Total Marks**	**Max. Marks:** 100	**Min. Passing Marks:** 35

PART – B: Content of the Course		
No. of Lectures per week: 02 Hours per week)		
Total No. of Lectures Required: T: 30 Hours		
Unit	**Topics**	**No. of Lectures**
I	**Indian History and Cultural Heritage** Characteristics of the Sindhu, Vedic, and Classical periods Indian concepts of co-existence and diversity Cultural Symbols: Religious architecture, music, dance and folk traditions Modern relevance of texts such as "Vasudhaiva Kutumbakam" and "Sarve Bhavantu Sukhinah" **Activity:** The program "Dialogue with the People"-discussion and note-taking about traditional lifestyle-values and knowledge from an elder of the family or community **Assignment:** Write a short essay (about 500 words) with pictures on any cultural heritage/festival/folk art of your village or town.	**06**
II	**Indian Constitution and Civic Duties** The Vedic Concept of State Duties(Vedic Rajdharma) and the modern Constitution Fundamental Rights and Duties: Dharma-Kartavya-Naitikta Youth citizens and their democratic participation Role of Education to Nation-Building **Activity:** "Public Policy Dialogue" – Organizing a Mock Constituent Assembly among students, where the fundamental values of India are presented and discussed. **Assignment 1:** Analyze any one fundamental right and its related duty from a Vedic/classical perspective. **Assignment 2:** Write an essay (400 words) on the role of youth in Indian democracy, from the perspective of "From Swaraj to Suraj".	**06**

III	**Indian Knowledge Tradition and Educational Perspective** Sources of Indian knowledge: Vedas, Upanishads, Philosophy, Smriti, Folk literature Gurukul Tradition: Student-centered learning, oral tradition, and memory-based learning Purpose of Education: Self-realization (Atmokarsha) and social welfare (Lokasangraha) Role of the Teacher: "Acharya Devo Bhava"- character building and contribution to social reconstruction **Activity 1:** Knowledge-sharing session: Demonstration of traditional teaching methods (dialogue, memorization-based learning). **Activity 2:** Recreation of Shlokas and meaning- based discussion - Especially from Shikshavalli and Bhagavad Gita etc. **Assignment 1:** Explain the objectives of Indian education based on any Vedic hymn or Upanishadic statement. **Assignment 2:** Write a short essay on examples of Guru–Shishya tradition or life values observed in your school, village, or family.	**06**

IV	**India's Philosophy of Life and the Concept of a Sustainable Future** Indian Life Perspective: Purusharth Chatushtaya, Ashrama system, Duty-Based Ethics Harmony with Nature: Yagya, Panchamahabhutas, ecological cycle and environmental balance Indian Economic Thought: Arthashastra, Swadeshi, labour culture, and public sector enterprises Indian Concept of Sustainable development and environmental balance **Activity 1:** Poster or slogan writing on "Simple Living, High Thinking" **Activity2:**Group presentation on Indian environmental traditions (yagya, tree worship, river, festivals, etc.) **Assignment 1:** Panchamahabhutas and Indian life perspective **Assignment 2:** Journey from 'Swadeshi' to 'Atmanirbhar Bharat' (Self-reliant India)	**06**
V	**Contemporary India and Global Role** Role of Religious, Cultural, and Intellectual Leadership in the Indian independence movement India's contributions: Space science, Yoga, diplomacy, peace philosophy Atmanirbhar Bharat: Integration of tradition and innovation India's soft power in the global context and its role in a multipolar world **Activity 1:** Student presentation on policy alternatives (Indian Model vs Western Model) **Activity 2:**Essay writing on the theme *"India @ 2047"* **Assignment 1:** Global India and Possibilities of Cultural Leadership **Assignment 2:**Technology and Ethics: Exploring the Indian Model of Integration	**06**

Part – C: Learning Resources
Textbooks, Reference Books, Other Resources
Suggested Readings: 1. Katdre, Indumati – Bharatiya Shiksha: Sankalpana evam Swaroop/ Punarsrijan, Prakashan Seva trust, Ahmedabad 2. Kumar, Krishan – PrachinBharatiya Shiksha Paddhati, Shri Saraswati Sadan, Delhi 3. Saluja, Chand Kiran (2023) – Shiksha: BharatiyaPariprekshya Sanskrit Samvardhan Pratishthan, New Delhi 4. Kapoor, Kapil & Singh, Avdhesh Kumar (Editor), (2005) – **Indian Knowledge Systems** (Khand 1-2) Indian Institution of Advance Study, Shimla; D.K. Printworld, New Delhi
Textbooks: 1. Swaroop, Devendra – Sanskriti: Ek Naam – Roop, Anek Pratiman Pratibha Prakashan, New Delhi 2. Swaroop, Devendra (Editor), (2010) – Rashtriya Shiksha Andolan ka Itihas (Hindi Sanskaran) Prabhat Pratisthan, New Delhi 3. Agrawal, Vasudev Sharan (Editor), (2023) – Rashtra, Dharma aur Sanskriti (Nibandh Sanchayan). Prabhat Prakashan, New Delhi
Reference Books: 1. Mishra, Rameshwar Pankaj (2024) – Advitiya samajshastra, Prabhat Prakashan, New Delhi 2. Pandey, Om Prakash (Editor) (2023) – Bharat Vaibhav, Rashtriya Pustak Nyas (NBT) , New Delhi 3. Subbarayappa, B.V. – Bhartiya Vigyan Parampara, Rashtriya Pustak Nyas (NBT) , New Delhi
Suggestive Digital Platform Web Links: ● https: //www.youtube.com/watch?v=VUOyldPx8h4 ● https://www.youtube.com/watch?v=1livkUGjeFA&list=PLfGFNx UDX0eholQwKZ2ekqaxY3PDtoDq-&index=4 ● https://www.youtube.com/watch?v=SuMnvLxc9ic ● https://www.youtube.com/watch?v=iPuRqFlmoSc ● https://www.youtube.com/watch?v=YZQeUq5d48Q&list=PL_a1TI5CC9RG8w PaNNDOk6VjSdhe0K3HE&index=6 ● https: //www.youtube.com/watch?v=9PLs_N6WbxE

Part – D: Assessment and Evaluation		
Only External Assessment		**Total Marks:** 100
External Assessment **End Semester Exams** **Time: 03 Hours**	(A) Five Short Answer Type Questions (B) Five Long Answer Type Questions	**Total Marks:** 100
Total Marks	100	
Credit Value	02	
Minimum Passing Marks	35	

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भाग अ : परिचय		
कार्यक्रम : **बी.एस.सी./बी.सी.ए/बी.बी.ए./बी.बी.ए. एफ. टी./बी.बी.ए. एच.ए.**		
कक्षा : **I वर्ष**	**सेमेस्टरः II**	**सत्र: जनवरी – जून 2026**
विषयः **Value Added Course (VAC)**		**Theory/ Practical: Theory**
1.	पाठ्यक्रम कोड	VAC – **201**
2.	पाठ्यक्रम शीर्षक	भारत बोध (Understanding India)
3.	पाठ्यक्रम प्रकार (कोर कोर्स/वोकेशनल) डीएसई/ माइनर /एमडी–आईडी/एसईसी/वीओसी)	VAC
4.	पूर्वापेक्षा (यदि कोई हो)	कक्षा 12 वी उतीर्ण
5.	पाठ्यक्रम का उद्देश्य	1. भारत के ऐतिहासिक, सांस्कृतिक और सवैधानिक स्वरूप की मूलभूत समझ विकसित करना। 2. भारत शिक्षा पद्धति, ज्ञान परंपरा और राष्ट्रीय मूल्यों के प्रति छात्रों में संवेदनशीलता उत्पन्न करना। 3. भारत की स्वतंत्रता संग्राम, लोकतांत्रिक विकास और वैश्विक भूमिका को समझने में सहायता करना। 4. संविधान में निहित दायित्वों एवं आधिकारों की जानकारी देकर छात्रों को जिम्मेदार नागरिक बनाना।
6.	पाठ्यक्रम अध्ययन की उपलब्धियां (कोर्स लर्निंग आउटकम)	इस कोर्स का अध्ययन करने के बाद विद्यार्थी में, 1. विद्यार्थी भारत की ऐतिहासिक,सांस्कृतिक और सामाजिक विविधता की मूलभूत समझ विकसित कर सकेंगे। 2. विद्यार्थी भारतीय ज्ञान परंपरा और राष्ट्रीय मूल्यों के प्रति संवेदनशीलता विकसित कर सेकेंगे। 3. विद्यार्थी भारत के स्वतंत्रता संग्राम, विकास यात्रा और वैश्विक भूमिका को समझ सकेंगे। 4. विद्यार्थी संविधान में निहित अधिकारों एवं कर्तव्यों का ज्ञान प्राप्त कर जिम्मेदार नागरिक बन सकेंगे।
7.	संभावित नौकरी भूमिकाएँ/ करियर अवसर	• सिविल सेवा अभ्यर्थी • सामाजिक कार्यकर्ता • पत्रकार / मीडिया प्रोफेशनल • काउंसलर / मोटिवेशनल ट्रेनर • कानून से जुड़े सहायक कार्य

8.	क्रेडिट मान	02	
9.	कुल अंक	अधिकतम अंकः 100	न्यूनतम अंकः 35

भाग ब–पाठ्यक्रम सामग्री	
प्रति सप्ताह कक्षाओं की संख्याः 2 घंटे प्रति सप्ताह	
आवश्यक व्याख्यानों की कुल संख्या : थ्योरी (T) 30 घंटे	
ईकाई	विषय
I	**भारतीय इतिहास और सांस्कृतिक विरासत** • सिन्धु, वैदिक, और शास्त्रीय काल की विशेषताएँ • सह–अस्तित्व और बहुलता की भारतीय अवधारणा • सांस्कृतिक प्रतीक : धर्म स्थापत्य, संगीत, नाट्य, लोकाचार • 'वसुधैव कुटुम्बकम्', 'सर्वे भवन्तु सुखिनः' जैसे सूत्रों की आधुनिक प्रासंगिकता **गतिविधियां :** • 'लोक से संवाद' कार्यक्रम–परिवार या समुदाय के किसी बुजुर्ग से पारंपरिक जीवन–मूल्य एवं ज्ञान पर चर्चा, और उसका लेखा–जोखा। **असाइनमेंट विषयः** • अपने गाँव या नगर की किसी स्थानीय सांस्कृतिक धरोहर/पर्व/लोककलाओं का लघु लेख चित्रों सहित तैयार करें (500 शब्द)।
II	**भारतीय संविधान और नागरिक दायित्व** • वैदिक राजधर्म और आधुनिक संविधान • मूल अधिकार और कर्तव्य : धर्म–कर्तव्य – नैतिकता • युवा नागरिक और लोकतांत्रिक भागीदारी • शिक्षा का राष्ट्रनिमार्ण में योगदान **गतिविधियॉः** • 'जननीति संवाद'–छात्रों के बीच मॉक संविधान सभा या युवा संसद का आयोजन, जिसमें भारत के मूल मूल्य प्रस्तुत करें। **असाइनमेंट विषयः** • किसी एक मौलिक अधिकार और उससे जुडे कर्तव्य का वैदिक/शास्त्रीय दृष्टिकोण से विश्लेषण करें। • भारतीय लोकतंत्र में युवाओं की भूमिका पर 'स्वराज से सुराज तक' दृष्टिकोण में निबंध (400 शब्द)

III	**भारतीय ज्ञान परंपरा और शिक्षा दृष्टिकोण** • भारतीय ज्ञान के स्त्रोत : वेद, उपनिषद, दर्शन, स्मृति, लोक साहित्य • गुरूकुल परंपराः शिष्य–केंद्रित शिक्षण, वाचिक परंपरा और स्मृति आधारित अधिगम • शिक्षा का उद्देश्य : आत्मोत्कर्ष एवं लोकसंग्रह • शिक्षक की भूमिका 'आचार्य देवो भवः'चरित्र निमार्ण, सामाजिक पुननिर्माण में योगदान **गतिविधियाँः** • ज्ञानवार्ता गोष्ठी–शास्त्रीय शिक्षा पर आधारित शिक्षण पद्धति (उदाहरणः संवाद, स्मृति आधारित अभ्यास) का डेमो प्रस्तुत करना। • श्लोक–गायन और उसका अर्थाथ संवाद–विशेष रूप से शिक्षावल्ली (तैतिरीयोपनिषद), गीता आदि से। **असाइनमेंट विषयः** • किसी वैदिक ऋचा या उपनिषद वाक्य के आधार पर भारतीय शिक्षा के उद्देशय का विवेचन करें। • अपने विद्यालय/ग्राम/परिवार में देखे गए गुरू–शिष्य परंपरा या जीवन–परमार्थ के उदाहरण पर लघु लेख।
IV	**भारत का जीवन – दर्शन और सतत भविष्य की अवधारणा** • भारतीय जीवन –दृष्टिः पुरुषार्थ चतुष्टय, आश्रम व्यवस्था और कर्तव्य आधारित नैतिकता • प्रकृति के साथ सामंजस्यः यज्ञ, पंचमहाभूत ऋतुचक्र और पर्यावरण संतुलन • भारतीय अर्थदर्शनः अर्थशास्त्र , स्वदेशी , श्रम–संस्कृति और लोक–उद्यम • सतत विकास और पर्यावरणीय न्याय की भारतीय अवधारणा **गतिविधियाँः** • 'सादा जीवन उच्च विचार' विषय पर पोस्टर या स्लोगन लेखन • भारतीय पर्यावरणीय परंपराओं (जैस यज्ञ, वृक्ष–पूजन, नदी महोत्सव आदि) पर समूह प्रस्तुति **असाइनमेंट विषयः** • पंचमहाभूत और भारतीय जीवन–दृष्टि • स्वदेशी से 'आत्मनिर्भर भारत' तक की यात्रा

V	**समकालील भारत और वैश्विक भूमिका** • स्वतंत्रता संग्राम में धार्मिक, सांस्कृतिक और बौद्धिक नेतृत्व की भूमिका • भारत का योगदानः अंतरिक्ष विज्ञान, योग, कूटनीति, शांति दर्शन • 'आत्मनिर्भर भारत' परंपरा और नवाचार का समन्वय • वैश्विक परिप्रेक्ष्य में भारत 'सॉफ्ट पावर',बहुध्रुवीय विश्व में भूमिका **गतिविधियाँः** • छात्रों द्वारा नीति – विकल्प प्रस्तुत करना (Indian Model vs Western Model) • "भारत @ 2047" विषय पर निबंध **असाइनमेंट विषयः** • "ग्लोबल भारत और सांस्कृतिक नेतृत्व की संभावना" • "तकनीक और नैतिकता : भारतीय समन्वय की खोज"

भाग–सः अध्ययन संसाधन
पाठ्यपुस्तकें, संदर्भ पुस्तकें, अन्य संसाधन
अनुशंसित पाठ्यसामग्री 1. काटदरे, इंदुमति। भारतीय शिक्षा : संकल्पना एवं स्वरूप/ पुनरूत्थान प्रकाशन सेवा ट्रस्ट, अहमदाबाद। 2. कुमार, कृष्ण। प्राचीन भारतीय शिक्षा पद्धति। श्री सरस्वती सदन, दिल्ली। 3. सलूजा, चंद किरण (2023)। शिक्षाः भारतीय परिप्रेक्ष्य। संस्कृत संवर्धन प्रतिष्ठान, नई दिल्ली। 4. कपूर, कपिल एवं सिंह, अवधेश कुमार(संपादक)। (2005)। Indian Knowledge Systems (खंड 1–2)। इंडियन इंस्टिट्यूट ऑफ एडवांस्ड स्टडी, शिमला; डी.के. प्रिंटवर्ल्ड, नई दिल्ली।
पाठ्यपुस्तकें: 1. स्वरूप, देवेद्र। संस्कृति एकः नाम–रूप अनेक प्रतिभा प्रकाशन, नई दिल्ली। 2. स्वरूप, देवेद्र। (संपादक)। (2010)। राष्ट्रीय शिक्षा आंदोलन का इतिहास (हिंदी संस्करण)। प्रभात प्रतिष्ठान, नई दिल्ली। 3. अग्रवाल, वासुदेव शरण (संपादक)। (2023)। राष्ट्र, धर्म और संस्कृति (निबंध संचयन)। प्रभात प्रकाशन, नई दिल्ली।
संदर्भपुस्तकें: 1. मिश्र, रामेश्वर 'पंकज '(2024)। अद्वितीय समाजशास्त्र। प्रभात प्रकाशन, नई दिल्ली। 2. पाण्डेय, ओम प्रकाश (संपादक)। (2023)। भारत वैभव। राष्ट्रीय पुस्तक न्यास (एनबीटी),नई दिल्ली। 3. सुब्बारायप्पा, बी.वी.। भारतीय विज्ञान परंपरा। राष्ट्रीय पुस्तक न्यास (एनबीटी), नई दिल्ली।

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- https: //www.youtube.com/watch?v=VUOyldPx8h4
- https://www.youtube.com/watch?v=1livkUGjeFA&list=PLfGFNx UDX0eholQwKZ2ekqaxY3PDtoDq-&index=4
- https://www.youtube.com/watch?v=SuMnvLxc9ic
- https://www.youtube.com/watch?v=iPuRqFlmoSc
- https://www.youtube.com/watch?v=YZQeUq5d48Q&list=PL_a1TI5CC9RG8wPaNNDOk6 VjSdhe0K3HE&index=6
- https: //www.youtube.com/watch?v=9PLs_N6WbxE

भाग–दः आकलन एवं मूल्यांकन		
केवल बाह्य मूल्याकंन		कुल अंकः 100
बाह्य मूल्यांकन अंतिम सेमेस्टर परीक्षा समयः 03 घंटे	(अ) पांच लघु प्रश्न (ब) पांच दीर्घ उत्तरीय प्रश्न	कुल अंकः 100
अधिकतम अंक	100	
क्रेडिट मान	02	
न्यूनतम उर्त्तीण अंक	35	