

Govt Navin College Hasoud
Dist. – Sakti

In accordance with University guidelines, the entire BA course is elective. Students have option to choose any three subjects which is run in institution for BA program.

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Nirja

Registrar
Shahad Mandhakar Patel Vishwavidyalaya
Raigarh (C.G.)

Principal
2023
Govt Navin College Hasoud
Dist Sakti (C.G.)



SHAHEED NANDKUMAR PATEL VISHWAVIDYALAYA RAIGARH (C.G.)

SYLLABUS
B.COM. PART-III

GROUPING OF SUBJECTS AND SCHEME OF EXAMINATION

Subject		Max.	Min.
Foundation Course			
I. Hindi Language		75	26
II. English Language		75	26
Compulsory Groups			
Group-I			
I. Income Tax	75	150	50
II. Auditing	75		
Group-II			
I. Indirect Taxes	75	150	50
II. Management Accounting	75		
Group-III Optional			
Option Group A (Finance Area)			
I. Financial Management	75	150	50
II. Financial Market Operations	75		
Option Group B (Marketing Area)			
I. Principles of Marketing	75	150	50
II. International Marketing	75		
Option Group C (Commercial Area)			
I. Information Technology and its Applications in Business	75	150	50
II. Essential of e-Commerce	75		
Option Group D (Money Banking & Insurance Area)			
I. Fundamental of Insurance	75	150	50
II. Money & Banking System	75		

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SHAHEED NANDKUMAR PATEL VISHWAVIDYALAYA RAIGARH (C.G.)

B.Sc. Part-III PAPER - III - (OPTIONAL)

(I) PRINCIPLES OF COMPUTER SCIENCE

- UNIT-I** **Data Storage** - Storage of bits. Main Memory. Mass Storage. Coding Information of Storage. The Binary System. Storing integers, storing fractions, communication errors.
Data Manipulation - The Central Processing Unit. The Stored-Program Concept. Programme Execution. Other Architectures. Arithmetic/Logic Instructions. Computer- Peripheral Communication.
- UNIT-II** **Operating System and Networks** - The Evolution of Operating System. Operating System Architecture. Coordinating the Machine's Activities. Handling Competition Among Process. Networks. Networks Protocol.
Software Engineering - The Software Engineering Discipline. The Software Life Cycle. Modularity. Development Tools and Techniques. Documentation. Software Ownership and Liability.
- UNIT-III** **Algorithms** - The Concept of an Algorithm, Algorithm Representation. Algorithm Discovery. Iterative Structures. Recursive Structures. Efficiency and Correctness. (Algorithms to be implemented in C++).
Programming Languages - Historical Perspective. Traditional Programming Concepts, Program Units. Language Implementation. Parallel Computing. Declarative Computing.
- UNIT-IV** **Data Structures** - Arrays. Lists. Stacks. Queues. Trees. Customised Data Types. Object Oriented Programming.
File Structure - Sequential Files. Text Files. Indexed Files. Hashed Files. The Role of the Operating System.
Database Structure - General Issues. The Layered Approach to Database Implementation. The Relational Model. Object-Oriented Database. Maintaining Database Integrity. E-R models
- UNIT-V** **Artificial Intelligence** - Some Philosophical Issues. Image Analysis. Reasoning, Control System Activities. Using Heuristics. Artificial Neural Networks. Application of Artificial Intelligence.
Theory of Computation - Turing Machines. Computable functions. A Non computable Function. Complexity and its Measures. Problem Classification.

REFERENCES :

1. J. Glen Brookshear, Computer Science : An Overview, Addition -Wesley.
2. Stanley B. Lippman, Josee Lojoie, C++ Primer (3rd Edition), Addison-Wesley.

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B.Sc. Part-III
PAPER - III - (OPTIONAL)
(II) DISCRETE MATHEMATICS

- UNIT-I** Sets and Propositions - Cardinality. Mathematical Induction, Principle of inclusion and exclusion. Computability and Formal Languages - Ordered Sets. Languages. Phrase Structure Grammars. Types of Grammars and Languages. Permutations. Combinations and Discrete Probability.
- UNIT-II** Relations and Functions - Binary Relations, Equivalence Relations and Partitions. Partial Order Relations and Lattices. Chains and Antichains. Pigeon Hole Principle.
- Graphs and Planar Graphs** - Basic Terminology. Multigraphs. Weighted Graphs. Paths and Circuits. Shortest Paths. Eulerian Paths and Circuits. Travelling Salesman Problem. Planner Graphs. Trees.
- UNIT-III** Finite State Machines - Equivalent Machines. Finite State Machines as Language Recognizers. Analysis of Algorithms - Time Complexity. Complexity of Problems. Discrete Numeric Functions and Generating Functions.
- UNIT-IV** Recurrence Relations and Recursive Algorithms - Linear Recurrence Relations with constant coefficients. Homogeneous Solutions. Particular Solution. Total Solution. Solution by the Method of Generating Functions. Brief review of Groups and Rings.
- UNIT-V** Boolean Algebras - Lattices and Algebraic Structures. Duality, Distributive and Complemented Lattices. Boolean Lattices and Boolean Algebras. Boolean Functions and Expressions. Propositional Calculus. Design and Implementation of Digital Networks. Switching Circuits.

REFERENCES :

1. C.L. Liu, Elements of Discrete Mathematics, (Second Edition), McGraw Hill, International Edition, Computer Science Series, 1986

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B.Sc. Part-III

PAPER - III - (OPTIONAL)

(III) PROGRAMMING IN C AND NUMERICAL ANALYSIS

(Theory & Practical)

Theory component will have maximum marks 30.

Practical component will have maximum marks 20.

UNIT-I Programmer's model of a computer. Algorithms. Flow Charts. Data Types. Arithmetic and input/output instructions. Decisions control structures. Decision statements. Logical and Conditional operators. Loop. Case control structures. Functions. Recursions. Preprocessors. Arrays. Puppeting of strings. Structures. Pointers. File formatting.

Numerical Analysis

UNIT-II Solution of Equations: Bisection, Secant, Regula Falsi, Newton's Method, Roots of Polynomials. **Interpolation:** Lagrange and Hermite Interpolation, Divided Differences, Difference Schemes, Interpolation Formulas using Differences. Numerical Differentiation. Numerical Quadrature: Newton-Cote's Formulas. Gauss Quadrature Formulas, Chebychev's Formulas.

UNIT-III Linear Equations: Direct Methods for Solving Systems of Linear Equations (Guass Elimination, LU Decomposition, Cholesky Decomposition), Iterative Methods (Jacobi, GaussSeidel, Relaxation Methods). **The Algebraic Eigenvalue problem:** Jacobi's Method, Givens' Method, Householder's Method, Power Method, QR Method, Lanczos' Method.

UNIT-IV Ordinary Differential Equations: Euler Method, Single-step Methods, Runge-Kutta's Method, Multi-step Methods, Milne-Simpson Method, Methods Based on Numerical Integration, Methods Based on Numerical Differentiation, Boundary Value Problems, Eigenvalue Problems. **Approximation:** Different Types of Approximation, Least Square Polynomial Approximation, Polynomial Approximation using Orthogonal Polynomials, Approximation with Trigonometric Functions, Exponential Functions, Chebychev Polynomials, Rational Functions.

Monte Carlo Methods

Unit-V Random number generation, congruential generators, statistical tests of pseudo-random numbers. Random variate generation, inverse transform method, composition method, acceptance rejection method, generation of exponential, normal variates, binomial and Poisson variates. Monte Carlo integration, hit or miss Monte Carlo integration, Monte Carlo integration for improper integrals, error analysis for Monte Carlo integration.

REFERENCES :

1. Henry Mullish and Herbert L. Cooper, Spirit of C: An Introduction to Modern Programming, Jaico Publishers, Bombay.
2. B.W. Kernighan and D.M. Ritchie. The C Programming Language 2nd Edition, (ANSI features) Prentice Hall, 1989.
3. Peter A Darnel and Philip E. Margolis, C : A Software Engineering Approach, Narosa Publishing House, 1993.
4. Robert C. Hutehison and Steven B. Just, Programming using C Language, McGraw Hill, 1988.
5. Les Hancock and Morris Krieger, The C Primer, McGraw Hill, 1988.
6. V. Rajaraman, Programming in C, Prentice Hall of India, 1994.
7. Byron S. Gottfried, Theory and Problems of Programming with C, Tata McGraw-Hill Publishing Co. Ltd., 1998.
8. C.E. Froberg, Introduction to Numerical Analysis, (Second Edition), Addison-Wesley, 1979.
9. James B. Scarborough, Numerical Mathematical Analysis, Oxford and IBHPublishing Co. Pvt. Ltd. 1966.

SHARDA

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10. Melvin J. Maron, Numerical Analysis A Practical Approach, Macmillan publishing Co., Inc. New York, 1982.
11. M.K. Jain, S.R.K. Iyengar, R.K. Jain, Numerical Methods Problems and Solutions, New Age International (P) Ltd., 1996.
12. M.K. Jain, S.R.K. Iyengar, R.K. Jain, Numerical Methods for Scientific and Engineering Computation, New Age International (P) Ltd., 1999.
13. R.Y. Rubistein, Simulation and the Monte Carlo Methods, John Wiley, 1981.
14. D.J. Yakowitz, Computational Probability and Simulation, Addison-Wesley, 1977.

PAPER - III - (OPTIONAL) (IV) PRACTICAL PROGRAMMING IN C AND NUMERICAL ANALYSIS

LIST OF PRACTICAL TO BE CONDUCTED...

1. Write a program in C to find out the largest number of three integer numbers.
2. Write a program in C to accept monthly salary from the user, find and display income tax with the help of following rules :

Monthly Salary	Income Tax
9000 or more	40% of monthly salary
7500 or more	30% of monthly salary
7499 or less	20% of monthly salary

3. Write a program in C that reads a year and determine whether it is a leap year or not.
4. Write a program in C to calculate and print the first n terms of fibonacci series using looping statement.
5. Write a program in C that reads in a number and single digit. It determines whether the first number contains the digit or not.
6. Write a program in C to computes the roots of a quadratic equation using case statement.
7. Write a program in C to find out the largest number of four numbers using function.
8. Write a program in C to find the sum of all the digits of a given number using recursion.
9. Write a program in C to calculate the factorial of a given number using recursion.
10. Write a program in C to calculate and print the multiplication of given 2D matrices.
11. Write a program in C to check that whether given string palindrome or not.
12. Write a Program in C to calculate the sum of series:

$$1 + x + \frac{1}{2!}x^2 + \frac{1}{3!}x^3 + \dots + \frac{1}{n!}x^n$$

13. Write a program in C to determine the grade of all students in the class using Structure. Where structure having following members - name, age, roll, sub1, sub2, sub3, sub4 and total.
14. Write a program in C to copy one string to another using pointer. (Without using standard library functions).
15. Write a program in C to store the data of five students permanently in a data file using file handling.

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SHAHEED NANDKUMAR PATEL VISHWAVIDYALAYA RAIGARH (C.G.)

M.A. (English Literature)

Semester Syllabus

Semester	Paper	Title	Marks Distribution		
			Theory	Internal Assessment	Total
First	I	Poetry (From Chaucer to Blake)	80	20	100
	II	Drama	80	20	100
	III	Prose	80	20	100
	IV	Fiction	80	20	100
Total Marks					400

Semester	Paper	Title	Marks Distribution		
			Theory	Internal Assessment	Total
Second	I	Poetry	80	20	100
	II	Drama	80	20	100
	III	Modern Literature (Poetry & Prose)	80	20	100
	IV	Fiction And Short Stories	80	20	100
Total Marks					400

Semester	Paper	Title	Marks Distribution		
			Theory	Internal Assessment	Total
Third	I	Critical Theory	80	20	100
	II	Indian Literature	80	20	100
	III	American Literature	80	20	100
	IV	Optional - 1. History of English Literature 2. Linguistics	80	20	100
Total Marks					400

Semester	Paper	Title	Marks Distribution		
			Theory	Internal Assessment	Total
Fourth	I	Literature in Translation	80	20	100
	II	Diaspora and Dalit Literature	80	20	100
	III	World Literature	80	20	100
	IV	Optional - 1. Colonial and Post Colonial Literature 2. Gender Studies	80	20	100
Total Marks					400
Grand Total Marks					1600

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शहीद नंदकुमार पटेल विश्वविद्यालय रायगढ़ (छ.ग.)

सेमेस्टर पाठ्यक्रम

एम.ए. हिन्दी

पाठ्यक्रम विवरण एवं अंक विभाजन					
सेमेस्टर	प्रश्न पत्र	विषय/प्रश्न पत्र का नाम	अंक विभाजन		
			सेमेस्टर परीक्षा	आंतरिक मूल्यांकन	पूर्णांक
प्रथम	1	हिन्दी साहित्य का इतिहास (आदिकाल, भक्तिकाल, रीतिकाल)	80	20	100
	2	प्राचीन काव्य	80	20	100
	3	आधुनिक गद्य साहित्य (नाटक एवं निबंध)	80	20	100
	4	भाषा विज्ञान	80	20	100
			योग	400	

पाठ्यक्रम विवरण एवं अंक विभाजन					
सेमेस्टर	प्रश्न पत्र	विषय/प्रश्न पत्र का नाम	अंक विभाजन		
			सेमेस्टर परीक्षा	आंतरिक मूल्यांकन	पूर्णांक
द्वितीय	1	हिन्दी साहित्य का इतिहास (आधुनिक काल)	80	20	100
	2	मध्यकालीन काव्य	80	20	100
	3	आधुनिक गद्य साहित्य (उपन्यास एवं कहानी)	80	20	100
	4	हिन्दी भाषा	80	20	100
			योग	400	

पाठ्यक्रम विवरण एवं अंक विभाजन					
सेमेस्टर	प्रश्न पत्र	विषय/प्रश्न पत्र का नाम	अंक विभाजन		
			सेमेस्टर परीक्षा	आंतरिक मूल्यांकन	पूर्णांक
तृतीय	1	भारतीय काव्यशास्त्र	80	20	100
	2	आधुनिक काव्य	80	20	100
	3	प्रयोजन मूलक हिन्दी	80	20	100
	4	भारतीय साहित्य	80	20	100
			योग	400	

पाठ्यक्रम विवरण एवं अंक विभाजन					
सेमेस्टर	प्रश्न पत्र	विषय/प्रश्न पत्र का नाम	अंक विभाजन		
			सेमेस्टर परीक्षा	आंतरिक मूल्यांकन	पूर्णांक
चतुर्थ	1	पाश्चात्य काव्यशास्त्र	80	20	100
	2	छायावादोत्तर काव्य	80	20	100
	3	पत्रकारिता प्रशिक्षण	80	20	100
	4	लोक साहित्य, छत्तीसगढ़ी भाषा का साहित्य	80	20	100
			योग	400	
				कुल योग	1600

पत्रिकाकार

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शहीद नंदकुमार पटेल विश्वविद्यालय रायगढ़ (छ.ग.)

SEMESTER SYLLABUS M.Sc. CHEMISTRY

SCHEME OF EXAMINATION & DISTRIBUTION OF MARKS

SEMESTER - I

Paper No.	Title of the Paper (s)	Internal Assessment	Term End Exam	Practical	Total Marks
1.	Inorganic Chemistry	20	80		100
2.	Organic Chemistry, Stereochemistry & Pericyclic Reaction	20	80		100
3.	Physical Chemistry- I	20	80		100
4.	Spectroscopy And Mathematics/Biology For Chemists	20	80		100
LAB-I	Organic Chemistry				100
LAB-II	Analytical Chemistry				100
TOTAL					600

SEMESTER - II

Paper No.	Title of the Paper (s)	Internal Assessment	Term End Exam	Practical	Total Marks
1.	Inorganic Chemistry	20	80		100
2.	Organic Chemistry	20	80		100
3.	Physical Chemistry	20	80		100
4.	Spectroscopy, Diffraction Methods & Computer For Chemists	20	80		100
LAB-I	Inorganic Chemistry				100
LAB-II	Physical Chemistry				100
TOTAL					600

SEMESTER - III

Paper No.	Title of the Paper (s)	Internal Assessment	Term End Exam	Practical	Total Marks
COMPULSORY FOR GROUP A, B & C					
1.	Applications Of Spectroscopy	20	80		100
2.	Chemistry Of Bio-Inorganic & Bio-Organic	20	80		100
LAB-I	General (Compulsory)			200	200
OPTIONAL GROUP-A INORGANIC					
3.	Organotransition Metal Chemistry	20	80		100
4.	Photo inorganic Chemistry	20	80		100
OPTIONAL GROUP- B ORGANIC					
3.	Physical Organic Chemistry	20	80		100
4.	Chemistry Of Heterocyclic Compounds	20	80		100
OPTIONAL GROUP-C PHYSICAL					
3.	Chemistry Of Materials	20	80		100
4.	Advanced Quantum Chemistry	20	80		100
TOTAL					600

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SEMESTER SYLLABUS M.Sc. CHEMISTRY

SEMESTER - IV

Paper No.	Title of the Paper (s)	Internal Assessment	Term End Exam	Practical	Total Marks
COMPULSORY FOR GROUP A, B & C					
1.	Photochemistry & Solid State Chemistry	20	80		100
2.	Bio-Physical & Environmental Chemistry	20	80		100
OPTIONAL GROUP-A INORGANIC					
3.	Bioinorganic Chemistry & Supra-Molecular Chemistry	20	80		100
4.	Analytical Chemistry	20	80		100
LAB-I	Special			200	200
OPTIONAL GROUP- B ORGANIC					
3.	Medicinal Chemistry	20	80		100
4.	Chemistry Of Natural Product	20	80		100
LAB-I	Special			200	200
OPTIONAL GROUP-C PHYSICAL					
3.	Liquid States	20	80		100
4.	Computation Chemistry	20	80		100
LAB-I	Special			200	200
TOTAL					600
GRAND TOTAL					2400

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