SCHEME OF EXAMINATION FOR B.Sc.(COMPUTER SCIENCE) SEMESTER SYSTEM(Regular Course) w.e.f. 2021-2022

Scheme for B.Sc.-I

Semester-I

Paper Exam Duration

1 Paper-I Computer And Programming Fundamentals 10 40 3 hrs.

2 Paper-II PC Software 10 40 3 hrs.

Semester-II

3 Paper-I Programming in C 10 40 3 hrs.

4 Paper-II Logical Organization of Computers 10 40 3 hrs.

5 Paper-III Practical

Morning Session: (PC-Software)

Evening Session: (Programming in C) ---- 100 6 hrs.(Two Sessions) Morning and Evening

NOTE: 1. Practical exam will be conducted annually in two sessions. However the workload will be distributed in both the semesters according to the relevant papers.

Scheme for B.Sc.-II

Paper Exam Duration

1 Paper-I Data Structures 10 40 3 hrs.

2 Paper-II Software Engineering 10 40 3 hrs.

Semester-II

3 Paper-I Object Oriented Programming with C++ 10 40 3 hrs.

4 Paper-II Operating System 10 40 3 hrs.

5 Paper-III Practical Morning Session: (Data Structure implementation using 'C')

Evening Session:

(Programming with C++) ---- 100 6 hrs.(Two Sessions)

Morning and Evening Total(Semester I & II) 40 2 60

Scheme for B.Sc.-III

1 Paper-I Fundamentals of Data Base Systems 10 40 3 hrs.

2 Paper-II Web Designing 10 40 3 hrs.

Semester-II

3 Paper-I Relational Data Base Management System 10 40 3 hrs.

4 Paper-II Computer Networks 10 40 3 hrs.

5 Paper- III Practical

Morning Session: (Web Designing using HTML)

Evening Session: (SQL and PL/SQL) ---- 100 6 hrs.(Two Sessions) Morning and Evening Total(Semester I & II) 40 2 60

PAPER I: Computer and Programming Fundamentals
Maximum Marks: 50 External: 40
Minimum Pass Marks: 18 Internal: 20
Time: 3 hours

UNIT-I

Computer Fundamentals: Definition, Functional components of computer, characteristics & classification of computers, Applications of computers in various fields. Memory: Concept of primary & secondary memory, RAM, ROM, types of ROM, Cache memory, CPU Registers, flash memory, Secondary storage devices: Sequential & direct access devices viz. magnetic tape, magnetic disk, CD, DVD.

UNIT-II

Computer hardware & software: I/O devices, definition of software, relationship between hardware and software, types of software, motherboard, ports. Overview of operating system: Definition, functions of operating system, concept of multiprogramming, multitasking, multithreading, multiprocessing, time-sharing, real time, single-user & multi-user operating system, examples of various operating systems.

UNIT-III

Planning the Computer Program: Concept of problem solving, Problem definition, Program design, Debugging, Types of errors in programming, Documentation. Techniques of Problem Solving: Flowcharting, algorithms, pseudo code, decision table, Structured programming concepts, Programming methodologies viz. top-down and bottomup programming.

UNIT-IV

Searching, Sorting, and Merging: Linear & Binary Searching, Bubble, Selection, and Insertion Sorting, Merging. Computer Languages: Analogy with natural language, machine language, assembly language, high-level language, language translators, characteristics of a good programming language.

TEXT BOOKS

1. Sinha, P.K. &Sinha, Priti, Computer Fundamentals, BPB
2. Dromey, R.G., How to Solve it By Computer, PHI

REFERENCE BOOKS

1. Balagurusamy E, Computing Fundamentals and C Programming, Tata McGraw Hill.
2. Norton, Peter, Introduction to Computer, McGraw-Hill
3. Leon, Alexis & Leon, Mathews, Introduction to Computers, Leon Tech World
4. Rajaraman, V., Fundamentals of Computers, PHI

PAPER-II PC Software

Maximum Marks: 50 External: 40 Minimum Pass Marks: 18 Internal: 20 Time: 3 hours

UNIT I

Windows: Basics of Windows. Windows History, Basic components of windows, icons, types of icons, taskbar, activating windows, using desktop, title bar, running applications, Windows explorer, managing files and folders, Configuring System devices. Control panel , using windows accessories.

UNIT-II

Documentation Using Word - Introduction to Office Automation, Creating & Editing Document, Formatting Document, Auto-text, Autocorrect, Spelling and Grammar Tool, Document Dictionary, Page Formatting, Bookmark, Advance Features of MS-Word-Mail Merge, Macros, Tables, File Management, Printing, Styles, linking and embedding object.

UNIT III

Electronic Spread Sheet using Excel - Introduction to MS-Excel, Creating & Editing Worksheet, Formatting and Essential Operations, Formulas and Functions, Charts, Advance features of MS-Excel-Pivot table & Pivot Chart, Linking and Consolidation, Database Management using Excel-Sorting, Filtering, Table, Validation, Goal Seek, Scenario.

UNIT IV

Presentation using PowerPoint: Presentations, Creating, Manipulating & Enhancing Slides, Organizational Charts, Excel Charts, Word Art, Layering art Objects, Animations and Sounds, Inserting Animated Pictures or Accessing through Object, Inserting Recorded Sound Effect or In-Built Sound Effect.

TEXT BOOKS

1. Microsoft Office – Complete Reference – BPB Publication
2. Learn Microsoft Office – Russell A. Stultz – BPB Publication

REFERENCES BOOKS

1. Courter, G Marquis . Microsoft Office 2000: Professional Edition. BPB.
2. Koers, D . Microsoft Office XP Fast and Easy. PHI.
3. Nelson, S L and Kelly, J . Office XP: The Complete Reference. Tata McGraw-Hill.

Paper I Programming in C

Maximum Marks: 50 External: 40 Minimum Pass Marks: 18 Internal: 20 Time: 3 hours

UNIT-I

Overview of C: History & Importance of C, Structure of a C Program. Elements of C: C character set, identifiers and keywords, Data types, Constants and Variables, Assignment statement, Symbolic constant. Input/output: Unformatted & formatted I/O function, Input functions (scanf(), getch(), getche(), getchar(), gets()), output functions (printf(), putch(), putchar(), puts()).

UNIT-II

Operators & Expression: Arithmetic, relational, logical, bitwise, unary, assignment, conditional operators and special operators. Arithmetic expressions, evaluation of arithmetic expression, type casting and conversion, operator hierarchy & associativity. Decision making & branching: Decision making with IF statement, IF-ELSE statement, Nested IF statement, ELSE-IF ladder, switch statement, goto statement.

UNIT-III

Decision making & looping: For, while, and do-while loop, jumps in loops, break, continue statement.

Functions: Definition, prototype, passing parameters, recursion.

UNIT-IV

Storage classes in C: auto, extern, register and static storage class, their scope, storage, & lifetime.

Arrays: Definition, types, initialization, processing an array. Structure and Union.

TEXT BOOKS

1. Gottfried, Byron S., Programming with C, Tata McGraw Hill
2. Balagurusamy, E., Computing Fundamentals and C Programming, Tata McGraw-Hill

REFERENCE BOOKS

1. Jeri R. Hanly& Elliot P. Koffman, Problem Solving and Program Design in C, Addison Wesley.
2. YashwantKanetker, Let us C, BPB
3. Rajaraman, V., Computer Programming in C, PHI

PAPER-II Logical Organization of Computers

Maximum Marks: 50 External: 40 Minimum Pass Marks: Internal: 20 Time: 3 hours

UNIT - I

Information Representation: Number Systems, Binary Arithmetic, Fixed-point and Floatingpoint representation of numbers, BCD Codes, Error detecting and correcting codes, Character Representation – ASCII, EBCDIC.

UNIT - II

Binary Logic: Boolean Algebra, Boolean Theorems, Boolean Functions and Truth Tables, Canonical and Standard forms of Boolean functions, Simplification of Boolean Functions – Venn Diagram, Karnaugh Maps.

UNIT - III

Digital Logic: Basic Gates – AND, OR, NOT, Universal Gates – NAND, NOR, Other Gates – XOR, XNOR etc. Combinational Circuits: Half-Adder, Full-Adder, Half- Subtractor, Full-Subtractor, Encoders, Decoders, Multiplexers, Demultiplexers, Comparators, Code Converters.

UNIT IV

Sequential Logic: Characteristics, Flip-Flops, Clocked RS, D type, JK, T type and Master- Slave flip-flops. State table, state diagram. Flip-flop excitation tables Shift registers : serial in parallel out and parallel in parallel out.. Designing counters – Asynchronous and Synchronous Binary Counters, Modulo-N Counters and Up-Down Counters

TEXT BOOKS

1. M. Morris Mano, Digital Logic and Computer Design, Prentice Hall of India Pvt. Ltd.
2. V. Rajaraman, T. Radhakrishnan, An Introduction to Digital Computer Design, Prentice Hall of India Pvt. Ltd.

REFERENCE BOOKS

1. Andrew S. Tanenbaum, Structured Computer Organization, Prentice Hall of India Pvt. Ltd.
2. Nicholas Carter, Schaum's Outlines Computer Architecture, Tata McGraw-Hill

B.Sc. Computer Science Semester III

PAPER I: Data Structures

Maximum Marks: 50 External: 40 Minimum Pass Marks: 18 Internal: 20 Time: 3 hours

UNIT – I

Introduction: Elementary data organization, Data Structure definition, Data type vs. data structure, Categories of data structures, Data structure operations, Applications of data structures, Algorithms complexity and time-space tradeoff, Big-O notation. Strings: Introduction, strings, String operations, Pattern matching algorithms

UNIT – II

Arrays: Introduction, Linear arrays, Representation of linear array in memory, Traversal, Insertions, Deletion in an array, Multidimensional arrays, Parallel arrays, Sparse matrix. Linked List: Introduction, Array vs. linked list, Representation of linked lists in memory, Traversal, Insertion, Deletion, Searching in a linked list, Header linked list, Circular linked list, Two-way linked list, Garbage collection, Applications of linked lists. Algorithm of insertion/ deletion in SLL.

UNIT – III

Stack: primitive operation on stack, algorithms for push and pop. Representation of Stack as Linked List and array, Stacks applications : polish notation, recursion. Introduction to queues, Primitive Operations on the Queues, Circular queue, Priority queue, Representation of Queues as Linked List and array, Applications of queue. Algorithm on insertion and deletion in simple queue and circular queue.

UNIT – IV

Trees - Basic Terminology, representation, Binary Trees, Tree Representations using Array & Linked List, Basic operation on Binary tree, Traversal of binary trees:- In order, Preorder & post order, Applications of Binary tree. Algorithm of tree traversal with and without recursion. Introduction to graphs, Definition, Terminology, Directed, Undirected & Weighted graph, Representation of graphs.

TEXT BOOKS

1. Seymour Lipschutz, “Data Structures”, Tata McGraw- Hill Publishing Company Limited, Schaum’s Outlines, New Delhi.
2. Yedidyan Langsam, Moshe J. Augenstein, and Aaron M. Tenenbaum, “Data Structures Using C”, Pearson Education., New Delhi.

REFERENCE BOOKS

1. Trembley, J.P. And Sorenson P.G., “An Introduction to Data Structures With Applications”, Mcgraw- Hill International Student Edition, New York.
2. Mark Allen Weiss, “Data Structures and Algorithm Analysis in C”, Addison- Wesley, (An Imprint Of Pearson Education), Mexico City.

B.Sc Computer Science Semester III

PAPER II: SOFWTARE ENGINEERING

Maximum Marks: 50 External: 40 Minimum Pass Marks: 18 Internal: 20 Time: 3 hours

UNIT – I

Introduction: Program vs. Software, Software Engineering, Programming paradigms, Software Crisis – problem and causes, Phases in Software development: Requirement Analysis, Software Design, Coding, Testing, Maintenance, Software Development Process Models: Waterfall, Prototype, Evolutionary and Spiral models, Role of Metrics.

UNIT – II

Feasibility Study, Software Requirement Analysis and Specifications: SRS, Need for SRS, Characteristics of an SRS, Components of an SRS**,** Problem Analysis**,** Information gathering tools, Organising and structuring information, Requirement specification, validation and metrics.

UNIT – III

Structured Analysis and Tools: Data Flow Diagram, Data Dictionary, Decision table, Decision trees, Structured English, Entity-Relationship diagrams .Software Project Planning: Cost estimation: COCOMO model, Project scheduling, Staffing and personnel planning, team structure, Software configuration management, Quality assurance plans, Project monitoring plans, Risk Management.

Unit IV

Software testing strategies: unit testing, integration testing, V and V , System testing, Alpha and Beta testing. Black box, white box testing. Cyclomatic Complexity. Software Implementation and Maintenance: Type of maintenance**,** Management of Maintenance, Maintenance Process, maintenance characteristics.

TEXT BOOKS:

1. Pressman R. S., “Software Engineering – A Practitioner’s Approach”, Tata McGraw Hill.
2. Jalote P., “An Integrated approach to Software Engineering”, Narosa.

REFERENCE BOOKS:

1. Sommerville, “Software Engineering”, Pearson Education.
2. Fairley R., “Software Engineering Concepts”, Tata McGraw Hill.

B.Sc Computer Science Semester IV
PAPER I: Object Oriented Programming with C++
Maximum Marks: 50 External: 40 Minimum Pass Marks: 18 Internal: 20 Time: 3 hours
.
UNIT – I
Object oriented Programming: Object-Oriented programming features and benefits. Object-Oriented features of C++, Class and Objects, Data Hiding & Encapsulation, Structures, Data members and Member functions, Scope resolution operator and its significance, Static Data Members, Static member functions, Nested and Local Class, Accessing Members of Class and Structure.
UNIT – II
Constructor, Initialization using constructor, types of constructor– Default, Parameterized & Copy Constructors, Constructor overloading, Default Values to Parameters, Destructors, Console I/O: Hierarchy of Console Stream Classes, Unformatted and Formatted I/O Operations.
UNIT – III
Manipulators, Friend Function, Friend Class, Arrays, Array of Objects, Passing and Returning Objects to Functions, String Handling in C++, Dynamic Memory Management: Pointers, new and delete Operator, Array of Pointers to Objects, this Pointer, Passing Parameters to Functions by Reference & pointers.
UNIT – IV
Static Polymorphism: Operators in C++, Precedence and Associativity Rules, Operator Overloading, Unary & Binary Operators Overloading, Function Overloading, Inline Functions, Merits/Demerits of Static Polymorphism.
TEXT BOOKS:
1. Herbert Scildt, C++, The Complete Reference,Tata McGraw-Hill
2. Robert Lafore, Object Oriented Programming in C++, SAMS Publishing
REFERENCE BOOKS:
1. Bjarne Stroustrup, The C++ Programming Language, Pearson Education
2. Balaguruswami, E., Object Oriented Programming In C++, Tata McGraw-Hill.

B.Sc Computer Science Semester IV

PAPER II: Operating System

Maximum Marks: 50 External: 40 Minimum Pass Marks: 18 Internal: 20 Time: 3 hours

UNIT – I

Introduction: operating system, architecture, functions, characteristics, historical evolution, types: Serial batch, multiprogramming, time sharing, real time, distributed and parallel. OS as resource Manager. Computer system structures: I/O structure, storage structure, storage hierarchy.Operating system structure: system components, services, system calls, system programs, system structures.

UNIT – II

Process management: process concepts, process state, process control block, operations, process scheduling, inter process communication. CPU Scheduling: scheduling criteria, levels of scheduling, scheduling algorithms, multiple processor scheduling. Deadlocks: Characterization, methods of handling, deadlock detection, prevention, avoidance, recovery.

UNIT – III

Storage Management: memory management of single-user and multiuser operating system, partitioning, swapping, paging and segmentation, virtual memory, Page replacement Algorithms, Thrashing. Process synchronization: critical section problems, semaphores. Mutual exclusion

UNIT – IV

Device and file management: Disk scheduling, Disk structure, Disk management, File Systems: Functions of the system, File access and allocation methods, Directory Systems: Structured Organizations, directory and file protection mechanisms.

TEXT BOOKS:

1. Silberschatz A., Galvin P.B.,and Gagne G., “Operating System Concepts”, John Wiley & Sons, Inc.,New York.
2. Godbole, A.S., “Operating Systems”, Tata McGraw-Hill Publishing Company, New Delhi.

REFERENCE BOOKS:

1. Deitel, H.M., “Operating Systems”, Addison- Wesley Publishing Company, New York.
2. Tanenbaum, A.S., “Operating System- Design and Implementation”, Prentice Hall of India, New

Paper-I: Fundamentals of Database Systems
Maximum Marks: 50 External: 40 Minimum Pass Marks: 18 Internal: 20 Time: 3 Hours

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UNIT – I

Basic Concepts – Data, Information, Records and files. Traditional file Based Approach-Limitations of Traditional File Based Approach, Database Approach-Characteristics of Database Approach, Database Management System (DBMS), Components of DBMS Environment, DBMS Functions and Components, Advantages and Disadvantages of DBMS.

UNIT – II

Actors on the Scene - Data and Database Administrator, Database Designers, End users Applications Developers and Workers behind the Scene. Database System Architecture – Three Levels of Architecture, Schemas – External, Conceptual and Internal Level, Database Languages – VDL, DDL, SDL, DML, SQL, Mappings – External/ Conceptual and Conceptual/Internal, Instances, Data Independence – Logical and Physical Data Independence

UNIT – III

Data Models: High Level, Low Level and Representational – Records- based Data Models, Object-based Data Models, Physical Data Models and Conceptual Models Entity-Relationship Model – Concepts, Entity Types, Entity Sets, Attributes, Relationships, Constraints, Keys , Degree, Cardinality etc. ER Diagrams of any Database Organization- Inventory System, Payroll System, Reservation System, Online Book Store etc.

UNIT – IV

Classification of Database Management System, Centralized and Client Server Architecture Relational Data Model:-Brief History, Terminology in Relational Data Structure, Relations, Properties of Relations, Keys – Primary, Secondary, Composite, Candidate, Alternate and Foreign Key, Domains, Integrity Constraints over Relations.

TEXT BOOKS:

 Elmasri Ramez & Navathe Shamkant B., “Fundamentals of Database Systems”, Addision & Weisely, New Delhi, 2007
 Date C.J., “Database Systems”, Prentice Hall of India, New Delhi, 2004

REFERENCE BOOKS:

 Korth H.F. & Silverschatz A., “Database Concepts”, Tata McGraw Hill, New Delhi, 2010
 Thomas Connolly Carolyn Begg, “Database Systems”, 3/e, Pearson Education

Paper-II: Web Designing
Maximum Marks: 50 External: 40 Minimum Pass Marks: 18 Internal: 20 Time: 3 Hours

UNIT – I

Introduction to Internet and World Wide Web; Evolution and History of World Wide Web; Basic Features; Web Browsers; Web Servers; Hypertext Transfer Protocol; URLs; Searching and Web-Casting Techniques; Search Engines and Search Tools

UNIT – II

Steps for Developing Website; Choosing the Contents; Home Page; Domain Names; Internet Service Provider; Planning and Designing Web Site; Creating a Website; Web Publishing: Hosting Site;

UNIT-III

Introduction to HTML; Hypertext and HTML; HTML Document Features; HTML Tags; Header, Title, Body, Paragraph, Ordered/Unordered Line, Creating Links; Headers; Text Styles; Text Structuring; Text Colors and Background; Formatting Text; Page layouts; Insertion of Text, Movement of Text

UNIT – IV

Images: Types of Images, Insertion of Image, Movement of Image, Ordered and Unordered lists; Inserting Graphics; Table Handling Functions like Columns, Rows, Width, Colours; Frame Creation and Layouts; Working with Forms and Menus; Working with Buttons like Radio, Check Box;

TEXT BOOKS:

 Bayross Ivan, “Web Enabled Commercial Applications Development using HTML, Javascript, DHTML & PHP”, BPB Publication, 2005
 Powell Thomas, “The Complete Reference HTML & CSS”, Tat Mc-Graw Hill, 2010

REFERENCE BOOKS:

 Wendy Willard, “HTML Beginners Guide”, Tata McGraw-Hill
 Deitel and Goldberg, “Internet and World Wide Web, How to Program”, PHI.

Paper-I: Relational Data Base Management System

Maximum Marks: 50 External: 40 Minimum Pass Marks: 18 Internal: 20 Time: 3 Hours

UNIT – I

Relational Model Concepts, Codd's Rules for Relational Model, Hierarchical Data Model– Introduction, Features, Components, Example, Network Data Model– Introduction, Features, Components, Example, Differences between Hierarchical Data Model and Network Data Model Comparison of Relational Data Model with Hierarchical Data Model and Network Data Model Relational Algebra:-Selection and Projection, Set Operation, Join and Division.

UNIT – II

Relational Calculus: Tuple Relational Calculus and Domain Relational Calculus. Functional Dependencies and Normalization -- Purpose, Data Redundancy, Update Anomalies, Partial/Fully Functional Dependencies, Transitive Functional Dependencies, Characteristics of Functional Dependencies, Decomposition and Normal Forms (1NF, 2NF, 3NF & BCNF).

UNIT – III

SQL: Data Definition and data types, Create Table, Insert Data, Viewing Data, Filtering Table Data, Sorting data, Creating Table from a Table, Destroy table, Update, View, Delete, Join, Concatenating data from Table Specifying Constraints in SQL; Primary Key, Foreign Key, Unique Key, Check Constraint, Using Functions

UNIT – IV

PL/SQL-Introduction, Advantages of PL/SQL The Generic PL/SQL Block: PL/SQL Execution Environment; PL/SQL Character Set and Data Types, Declaration and Assignment of Variables Control Structure in PL/SQL: Conditional Control, Iterative Control, Sequential Control

TEXT BOOKS:

- Elmasri Ramez & Navathe Shamkant B., “Fundamentals of Database Systems”, Addision & Weisely, New Delhi, 2007
- Bayross Ivan, SQL, PL/SQL, “The Programming Language of Oracle”, BPB Publication, 2002

REFERENCE BOOKS:

- Date C.J., “Database Systems”, Prentice Hall of India, New Delhi, 2004

Paper-II: Computer Networks

Maximum Marks: 50 External: 40 Minimum Pass Marks: 18 Internal: 20 Time: 3 Hours

UNIT – I

Introduction to Data Communication and Computer Networks; Uses of Computer Networks; Types of Computer Networks and their Topologies; Network Hardware Components: Connectors, Transceivers, Repeaters, Hubs, Network Interface Cards and PC Cards, Bridges, Switches, Routers, Gateways; Network Software: Network Design issues and Protocols; Connection-Oriented and Connectionless Services; OSI Reference Model; TCP/IP Model;

UNIT – II

Analog and Digital Communications Concepts: Analog and Digital data and signals; Bandwidth and Data Rate, Capacity, Baud Rate; Guided and Wireless Transmission Media; Communication Satellites; Switching and Multiplexing; Modems and modulation techniques;

UNIT - III

Data Link Layer Design issues; Error Detection and Correction methods; Sliding Window Protocols: One-bit, Go Back N and Selective Repeat; Media Access Control: ALOHA, Slotted ALOHA, CSMA, Collision free protocols; Introduction to LAN technologies: Ethernet, Switched Ethernet, Fast Ethernet, Gigabit Ethernet; Token Ring; Introduction to Wireless LANs and Bluetooth;

UNIT – IV

Routing Algorithms: Flooding, Shortest Path Routing, Distance Vector Routing; Link State Routing, Hierarchical Routing; Congestion Control; Traffic shaping; Choke packets; Load shedding; Application Layer: Introduction to DNS, E-Mail and WWW services; Network Security Issues: Security attacks; Encryption methods; Firewalls; Digital Signatures;

TEXT BOOKS:

- Andrew S. Tanenbaum, “Computer Networks”, Pearson Education
- Michael A. Gallo, William M. Hancock, “Computer Communications and Networking Technologies”, CENGAGE Learning.

REFERENCE BOOKS:

- Behrouz A Forouzan, “Data Communications and Networking”, McGraw Hill.
- Bhushan Trivedi, “Computer Networks”, Oxford

INDIRA GANDHI NATIONAL COLLEGE. LADWA DISTT. KURUKSHETRA

Performa for Practical Exam. Awards

(2021-22)

Examination:	**B.Sc. II Sem**	Subject:	**Computer Sc.**
Paper:	**Practical**	Date Of Exam.	**08-07-2022**
Maximum Marks:	**100**	Passing Marks:	**35**

Sr. No.	University Roll No.	Marks	Marks in Words	Initials
1	210037702	80	Eighty only	
2	210037704	85	Eighty Five	
3	210037706	82	Eighty Two	
4	210037710	90	Ninety only	
5	210037719	87	Eighty Seven	
6	210037720	85	Eighty Five	
7	210037732	80	Eighty only	
8	210037734	85	Eighty Five	
9	210037740	80	Eighty Only	
10	210037741	80	Eighty Only	
11	210037742	80	Eighty Only	
12	210037744	90	Ninety Only	

Total Students Alloted: 12
Passed 12
Fail/ Absent: Nil

(Name in capital letters RAJBIR
Internal Examiner

Signature
(Identity No.)

(Name in capital letters NAVEEN MONGA
External Examiner

Signature
(Identity No. 59)

Note: Signature chart of the candidates must be attached with the award lists

INDIRA GANDHI NATIONAL COLLEGE. LADWA DISTT. KURUKSHETRA
Performa for Practical Exam. Awards

(2021-22)

Examination:	**B.A. II Sem**	Subject:	**Computer Sc.**
Paper:	**Practical**	Date Of Exam.	**08-07-2022**
Maximum Marks:	**60**	Passing Marks:	**21**

Sr. No.	University Roll No.	Marks	Marks in Words	Initials
	110596002	Absent	Absent	
1	110596004	40	Forty only	
2	210070207	47	Forty Seven	
3	210070208	47	Forty Seven	
4	210070209	47	Forty seven	
5	210070210	55	Fifty five	
6	210070213	30	Thirty Only	
7	210070214	30	Thirty Only	
8	210070224	Absent	Absent	
9	210070229	55	Fifty five	
11	210070259	50	Fifty only	
12	210070273	52	Fifty two	
13	210070296	52	Fifty two	
14	210070322	40	Forty only	
15	210070328	50	Fifty only	
16	210070352	47	Forty seven	
17	210070353	Absent	Absent	
18	210070354	Absent	Absent	
19	210070363	30	Thirty only	
20	210070386	50	Fifty only	
21	210070392	45	Forty Five	
22	210070404	Absent	Absent	

Total Students Alloted: 22
Passed 17
Fail/ Absent: 05

(Name in capital letters RAJBIR
Internal Examiner

Signature
(Identity No.)

(Name in capital letters NAVEEN MONGA
External Examiner

Signature
(Identity No. 59)

Note: Signature chart of the candidates must be attached with the award lists

INDIRA GANDHI NATIONAL COLLEGE. LADWA DISTT. KURUKSHETRA

Performa for Practical Exam. Awards

(2021-22)

Examination:	**B.Sc. IV Sem**	Subject:	**Computer Sc.**
Paper:	**Practical**	Date Of Exam.	**06-07-2022**
Maximum Marks:	**100**	Passing Marks:	**35**

Sr. No.	University Roll No.	Marks	Marks in Words	Initials
1	201037704	84	EIGHTY FOUR	
2	201037709	85	EIGHTY FIVE	
3	201037713	84	EIGHTY FOUR	
4	201037719	90	NINETY ONLY	
5	201037722	86	EIGHTY SIX	
6	201037724	90	NINETY ONLY	
7	201037727	85	EIGHTY FIVE	
8	201037734	ABSENT	ABSENT	
9	201037736	82	EIGHTY TWO	
10	201037741	50	FIFTY ONLY	

Total Students Alloted: 10
Passed 09
Fail/ Absent: 01

(Name in capital letters RAJBIR
Internal Examiner

Signature
(Identity No.)

(Name in capital letters RAJESH VERMA
External Examiner

Signature
(Identity No. 57)

Note: Signature chart of the candidates must be attached with the award lists

INDIRA GANDHI NATIONAL COLLEGE. LADWA DISTT. KURUKSHETRA
Performa for Practical Exam. Awards

(2021-22)

Examination:	**B.A. IV Sem**	Subject:	**Computer Sc.**
Paper:	**Practical**	Date Of Exam.	**06-07-2022**
Maximum Marks:	**60**	Passing Marks:	**21**

Sr. No.	University Roll No.	Marks	Marks in Words	Initials
1	201067205	51	FIFTY ONE	
2	201067224	50	FIFTY ONLY	
3	201067254	50	FIFTY ONLY	
4	201067268	36	THIRTY SIX	
5	201067345	36	THIRTY SIX	
6	201067346	28	TWENTY EIGHT	

Total Students Alloted: 06
Passed 06
Fail/ Absent: NIL

(Name in capital letters RAJBIR
Internal Examiner

Signature
(Identity No.)

(Name in capital letters RAJESH KUMAR
External Examiner

Signature
(Identity No. 57)

Note: Signature chart of the candidates must be attached with the award lists

INDIRA GANDHI NATIONAL COLLEGE. LADWA DISTT. KURUKSHETRA
Performa for Practical Exam. Awards

(2021-22)

Examination:	**B.A. VI Sem**	Subject:	**Computer Sc.**
Paper:	**Practical**	Date Of Exam.	**20-07-2022**
Maximum Marks:	**60**	Passing Marks:	**21**

Sr. No.	University Roll No.	Marks	Marks in Words	Initials
1	191071117	51	FIFTY ONE	
2	191071227	52	FIFTY TWO	
3	191071297	50	FIFTY ONLY	
4	191071308	45	FOURTY FIVE	
5	191071343	AB	Absent	

Total Students Alloted: 04
Passed 04
Fail/ Absent: 01

(Name in capital letters RAJBIR
Internal Examiner

Signature
(Identity No.)

(Name in capital letters **Ms. Swati Goel**
External Examiner

Signature
(Identity No. 07)

Note: Signature chart of the candidates must be attached with the award lists

INDIRA GANDHI NATIONAL COLLEGE. LADWA DISTT. KURUKSHETRA
Performa for Practical Exam. Awards

(2021-22)

Examination:	**B.Sc. VI Sem**	Subject:	**Computer Sc.**
Paper:	**Practical**	Date Of Exam.	**20-07-2022**
Maximum Marks:	**100**	Passing Marks:	**35**

Sr. No.	University Roll No.	Marks	Marks in Words	Initials
1	191038307	85	EIGHTY FIVE	
2	191038309	85	EIGHTY FIVE	
3	191038325	70	SEVENTY ONLY	
4	191038327	80	EIGHTY ONLY	
5	191038328	80	EIGHTY ONLY	

Total Students Alloted: 05
Passed 05
Fail/ Absent: Nil

(Name in capital letters RAJBIR
Internal Examiner

Signature
(Identity No.)

(Name in capital letters **Ms. Swati Goel**
External Examiner

Signature
(Identity No. 07)

Note: Signature chart of the candidates must be attached with the award lists

SCHEME OF EXAMINATION FOR COMPUTER SCIENCE PRACTICAL

(2020-21)

Class	Paper	Syllabus	Max. Marks	Time
B.A.-I Year	Paper-III	PC-Software Programming in C	100	6 hours
B.A.-II Year	Paper-III	Data Structure implementation using 'C' Programming with C++	100	6 hours
B.A.-III Year	Paper-III	Web Designing using HTML SQL and PL/SQL	100	6 hours

Candidates present in the examination

Examination	Allotted candidates	Present candidates	Absent candidates
BA computer Sc. Practical	17	15	2

Attendance Chart

Examination **B.A. II Sem.**

Date of Examination **06 JULY 2021**

Subject: **Computer**

Paper**:** **Practical**

Sr. No.	University Roll No.	Attendance
1	201067205	Present
2	201067224	Present
3	201067254	Present
4	201067268	Present
5	201067296	Absent
6	201067345	Present
7	201067346	Present
8	201067347	Present

Total number of Candidates allotted by the Principal: **08**

Total No. of Candidates examined by the Examiner : **07**

Total no. of Candidates absent in the Practical Examination: **01**

Signature of Principal

I.G.N. COLLEGE LADWA

Signature of Practical Examiner

I.G.N. COLLEGE LADWA

Attendance Chart

Examination **B.A. IV Sem.**

Date of Examination **03 JULY 2021**

Subject: **Computer**

Paper**:** **Practical**

Sr. No.	University Roll No.	Attendance
1	191071117	Present
2	191071227	Present
3	191071297	Present
4	191071308	Present
5	191071343	Absent

Total number of Candidates allotted by the Principal: **05**

Total No. of Candidates examined by the Examiner : **04**

Total no. of Candidates absent in the Practical Examination: **01**

Signature of Principal

I.G.N. COLLEGE LADWA

Signature of Practical Examiner

I.G.N. COLLEGE LADWA

Attendance Chart

Examination **B.A. VI Sem.**

Date of Examination **02 JULY 2021**

Subject: **Computer**

Paper**:** **Practical**

Sr. No.	University Roll No.	Attendance
1	180068639	Present
2	180068664	Present
3	180068716	Present
4	180068718	Present

Total number of Candidates allotted by the Principal: **04**

Total No. of Candidates examined by the Examiner : **04**

Total no. of Candidates absent in the Practical Examination: **Nil**

Signature of Principal

I.G.N. COLLEGE LADWA

Signature of Practical Examiner

I.G.N. COLLEGE LADWA

SCHEME OF EXAMINATION FOR COMPUTER SCIENCE PRACTICAL

(2020-21)

Class	Paper	Syllabus	Max. Marks	Time
B.Sc.-I Year	Paper-III	PC-Software Programming in C	100	6 hours
B.Sc.-II Year	Paper-III	Data Structure implementation using 'C' Programming with C++	100	6 hours
B.Sc.-III Year	Paper-III	Web Designing using HTML SQL and PL/SQL	100	6 hours

Candidates present in the examination

Examination	Allotted candidates	Present candidates	Absent candidates
BSc computer Sc. Practical	19	19	0

Attendance Chart

Examination **B.Sc. II Sem.**

Date of Examination **06 JULY 2021**

Subject: **Computer**

Paper**:** **Practical**

Sr. No.	University Roll No.	Attendance
1	201037704	Present
2	201037709	Present
3	201037713	Present
4	201037719	Present
5	201037722	Present
6	201037724	Present
7	201037727	Present
8	201037734	Present
9	201037736	Present

Total number of Candidates allotted by the Principal: **09**

Total No. of Candidates examined by the Examiner : **09**

Total no. of Candidates absent in the Practical Examination: **Nil**

Signature of Principal

I.G.N. COLLEGE LADWA

Signature of Practical Examiner

I.G.N. COLLEGE LADWA

Attendance Chart

Examination **B.Sc. IV Sem.**

Date of Examination **03 JULY 2021**

Subject: **Computer**

Paper**:** **Practical**

Sr. No.	University Roll No.	Attendance
1	191038307	Present
2	191038309	Present
3	191038325	Present
4	191038327	Present
5	191038328	Present

Total number of Candidates allotted by the Principal: **05**

Total No. of Candidates examined by the Examiner : **05**

Total no. of Candidates absent in the Practical Examination: **Nil**

Signature of Principal

I.G.N. COLLEGE LADWA

Signature of Practical Examiner

I.G.N. COLLEGE LADWA

Attendance Chart

Examination **B.Sc. VI Sem.**

Date of Examination **02 JULY 2021**

Subject: **Computer**

Paper**:** **Practical**

Sr. No.	**University Roll No.**	**Attendance**
1	180037702	95
2	180037703	92
3	180037708	90
4	180037721	85
5	180037728	90

Total number of Candidates allotted by the Principal: **05**

Total No. of Candidates examined by the Examiner : **05**

Total no. of Candidates absent in the Practical Examination: **Nil**

Signature of Principal

I.G.N. COLLEGE LADWA

Signature of Practical Examiner

I.G.N. COLLEGE LADWA