

Govt. College, Ropar
Computer Department (HEIS)

Class B.C.A Sem. I
(Session 2022-2023)

Week	Lesson scheduled
1 st	ਪੰਜਾਬੀ ਧੁਨੀ ਵਿਉਂਤ ਸਵਰ, ਵਿਅੰਜਨ ਧੁਨੀਆਂ ਦਾ ਵਰਗੀਕਰਨ
2 nd	ਪੰਜਾਬੀ ਤਾਸਾ ਅਤੇ ਗੁਰਮੁਖੀ ਲਿਪੀ ਦਾ ਰਿਸਤਾ, ਸਬਦ ਜੋੜਾਂ ਦੇ ਨਿਯਮ
3 rd	ਚੰਨ ਸੂਰਜ ਦੀ ਵਹਿੰਗੀ (ਕਾਵਿ ਸੰਗ੍ਰਹਿ) 1-5 ਕਵਿਤਾਵਾਂ ਦਾ ਸਾਰ
4 th	ਚੰਨ ਸੂਰਜ ਦੀ ਵਹਿੰਗੀ (ਕਾਵਿ ਸੰਗ੍ਰਹਿ) 6-10 ਕਵਿਤਾਵਾਂ ਦਾ ਸਾਰ
5 th	ਇਹ ਹੈ ਬਾਰਬੀ ਸੰਸਾਰ (ਵਾਰਤਕ ਸੰਗ੍ਰਹਿ) 1-4 ਲੇਖ ਦਾ ਸਾਰ, ਵਿਸ਼ਾ
6 th	ਇਹ ਹੈ ਬਾਰਬੀ ਸੰਸਾਰ (ਵਾਰਤਕ ਸੰਗ੍ਰਹਿ) 5-9 ਲੇਖ ਦਾ ਸਾਰ, ਵਿਸ਼ਾ
7 th	ਇਹ ਹੈ ਬਾਰਬੀ ਸੰਸਾਰ ਵਾਰਤਕ ਸੰਗ੍ਰਹਿ (10-14 ਅਧਿਆਇ, ਵਿਸ਼ਾ 4 ਚੰਨ ਸੂਰਜ ਦੀ ਵਹਿੰਗੀ (ਕਾਵਿ ਸੰਗ੍ਰਹਿ) 11-17 ਕਵਿਤਾਵਾਂ ਦਾ ਸਾਰ
8 th	➤ MST
9 th	➤ MST
10 th	ਚੰਨ ਸੂਰਜ ਦੀ ਵਹਿੰਗੀ (ਕਾਵਿ ਸੰਗ੍ਰਹਿ) 18-27 ਕਵਿਤਾਵਾਂ ਦਾ ਸਾਰ
11 th	ਚੰਨ ਸੂਰਜ ਦੀ ਵਹਿੰਗੀ (ਕਾਵਿ ਸੰਗ੍ਰਹਿ) 28-39 ਕਵਿਤਾਵਾਂ ਦਾ ਸਾਰ
12 th	ਇਹ ਹੈ ਬਾਰਬੀ ਸੰਸਾਰ (ਵਾਰਤਕ ਸੰਗ੍ਰਹਿ) 15-18 ਲੇਖ ਦਾ ਸਾਰ, ਵਿਸ਼ਾ
13 th	ਇਹ ਹੈ ਬਾਰਬੀ ਸੰਸਾਰ (ਵਾਰਤਕ ਸੰਗ੍ਰਹਿ) 19-21 ਲੇਖ ਦਾ ਸਾਰ, ਵਿਸ਼ਾ
14 th	ਪੰਜਾਬੀ ਲੇਖਣੀ ਵਿੱਚ ਕੰਪਿਊਟਰ ਦੀ ਵਰਤੋਂ, ਗੁਰਮੁਖੀ ਕਨਵਰਟਰ ਜਾਣ ਪਛਾਣ
15 th	ਦੁਹਰਾਈ।
16 th	ਦੁਹਰਾਈ।

Gurpreet Kaur
Teacher

Jaspreet
Principal
Govt. College
Ropar

H.O.D.
H.O.D.

Govt. College, Ropar
Computer Department (HEIS)

Class B.C.A Sem. I

(Session 2022-2023)

Subject : General English- I

Week	Lesson scheduled
1 st	<ul style="list-style-type: none"> • Kabuliwallah • Grief • Class test
2 nd	<ul style="list-style-type: none"> • The Eyes Are Not Here • The Doctor's Word • Class test
3 rd	<ul style="list-style-type: none"> • Translation • Class test
4 th	<ul style="list-style-type: none"> • Grammar Exercise 1-6 • Class test
5 th	<ul style="list-style-type: none"> • Grammar Exercise 7-12 • Class test
6 th	<ul style="list-style-type: none"> • Grammar Exercise 13-18 • Class test
7 th	<ul style="list-style-type: none"> • Grammar Exercise 19- 24 • Revision
8 th	➤ MST
9 th	➤ MST
10 th	<ul style="list-style-type: none"> • The Death of a Hero • Uncle Podger Hangs a Picture • Class test
11 th	<ul style="list-style-type: none"> • Grammar Exercise 25-30 • Class test
12 th	<ul style="list-style-type: none"> • Grammar Exercise 31-37 • Class test
13 th	<ul style="list-style-type: none"> • Grammar Exercise 69- 75 • Class test
14 th	<ul style="list-style-type: none"> • Grammar Exercise 76- 81 • Class test
15 th	<ul style="list-style-type: none"> • Translation • Class test
16 th	<ul style="list-style-type: none"> • Revision and Class test

Harpreet
 Teacher

Jaspreet Singh
 Principal
 Govt. College

Harpreet
 H.O.D

SYLLABUS PLAN**CLASS : BA-Sem-I****Subject : Fundamentals of Information Technology****Sep 2022 to Dec 2022**

Month	Topic
Sep (Month 1)	Week 1 Computer Fundamentals: Block diagram of a computer, characteristics of computers and generations of computers. Categories of Computers - Supercomputer, mainframe computer, network server,
	Week 2. Workstation, Desktop computers, notebook computer, Tablet PC, handheld PC, smart phone.
	Week 3 Input Devices: Keyboard, Mouse, Joy tick, Track Ball, Touch Screen, Light Pen, Digitized, Scanners, Speech Recognition Devices, Optical Recognition devices - OMR, OBR, OCR
	Week 4 Output Devices: Monitors, Impact Printers - Dot matrix, Character and Line printer, Non Impact Printers — DeskJet and Laser printers, Plotter.
Oct (Month 2)	Week 1 Memories: Memory Hierarchy, Primary Memory — RAM, ROM, Cache memory. Secondary Storage Devices - Hard Disk, Compact Disk, DC D, Flash memory. Software: Types of Software- System Software. Application Software, Firmware.
	Week 2 Type of System Software: Operating Systems, Language Translators, Utility Programs. Communications Software. Commonly Used Application Software: Word Processor, Spreadsheet, Database, Education, Entertainment Software.
	Week 3 Computer Languages: Machine language, assembly language, high level language, 4GL. Number System: Non-positional and positional number systems, Base conversion, Concept of Bit and Byte, binary, decimal, hexadecimal, and octal systems, conversion from one system to the other.
	Week 4 Binary Arithmetic: Addition, subtraction and multiplication, 1's complement, 2's complement, subtraction using 1's complement and 2's complement. Computer Codes: weighted and <i>non-weighted</i> code. BCD, EBCDIC, ASCII, Unicode.
Nov (Month 3)	Week 1 Computer Network: Network types, network topologies. Internet Related Concepts: Internet, World Wide Web, Hypertext, Uniform Resource Locator, Web Browsers, IP Address, Domain Name
	Week 2 Internet Services Providers, Internet Security, Web Search Engine, Net Surfing, web portal. Wiki, Blog. Advanced Trends in IT : Mobile Internet, GPS, 3G, 4G, Wi-Fi, Bluetooth, Cloud Technology.

	Week 3 Virtual LAN Technology, Firewall, E Commerce, M Commerce, Nanotechnology, Virtual Reality, BPO and KPO, Online shopping, Social Media - YouTube, FaceBook, Linked in, Twitter, Google+.
	Week 4 Applications of IT: IT in Business and Industry, IT in Education & training, IT in Science and Technology, IT and Entertainment, Current Trends in IT Application - AI, Virtual Reports, voice recognition, Robots, Multimedia Technology.
Dec (Month 4)	Week 1 Revision
	Week 2 Revision


HOD


Manpreet Singh

J. K. S. S.
Principal
Govt. College
Ropar

Department of Computer Science (HEIS), Government College, Ropar
(2022-23)
Class BCA Sem. IST Subject Fundamental of Information Technology

Week	Topics to be Covered
Week 1	Introduction to Computer Fundamentals - Block diagram of a computer - Characteristics of computers - Generations of computers - Categories of computers
Week 2	Input and Output Devices - Input devices: Keyboard, Mouse, Joystick, Trackball, Touch Screen - Output devices: Monitors, Impact Printers (Dot matrix, Character and Line printer)
Week 3	- Light Pen, Digitizer, Scanners, Speech Recognition Devices - Optical Recognition devices (OMR, OBR, OCR)
Week 4	Computer Memories - Memory Hierarchy - Primary Memory: RAM, ROM, Cache memory - Secondary Storage Devices: Hard Disk, Compact Disk
Week 5	- DVD, Flash memory, - Communications Software - Commonly Used Application Software: Word Processor, Spreadsheet
Week 6	- Types of Software: System Software, Application Software, Firmware, - Minicomputer, Microcomputer - System Software: Operating Systems, Language Translators, Utility Programs
Week 7	- Types of Computers: Supercomputer, Mainframe computer
Week 8	MST
Week 9	MST
Week 10	- Database, Education, Entertainment Software - Computer Languages: Machine language, Assembly language
Week 11	- High-level language, 4GL
Week 12	- Non-positional and positional number systems - Base conversion
Week 13	- Concept of Bit and Byte - Binary, decimal, hexadecimal, and octal systems
Week 14	- Conversion between number systems - Binary Arithmetic: Addition, Subtraction
Week 15	- Binary Arithmetic: Multiplication - 1's complement, 2's complement
Week 16	- Subtraction using 1's complement and 2's complement - Computer Codes: Weighted and non-weighted code, BCD, EBCDIC, ASCII, Unicode


Teacher's Signature


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Department of Computer Science (HEIS), Government College, Ropar
(2022-23)
Class PGDCA Sem. 1st Subject Fundamental of Information Technology

SESSION	TOPIC
Week 1	Introduction: Historical Evolution of Computer, Block Diagram of computer, -characterisation of computers, types of computers, the computer generations.
Week 2	Basic Anatomy of Computers: memory unit, input-output unit, arithmetic logic unit, control unit, central processing unit, RAM, ROM, PROM, EPROM.
Week 3	Input-Output Devices: Keyboard, Mouse, Joy tick, Track Ball, Touch Screen, Light Pen, Digitizer, Scanners, Voice Recognition Devices, Optical Recognition devices,
Week 4	Computer hardware and software
Week 5	Binary Arithmetic: Addition, subtraction and multiplication
Week 6	Dot matrix, Character and Line printer, Deskjet printer, Laser printer, and plotters.
Week 7	Number System: Non-positional and positional number systems, Base conversion, binary, decimal, hexadecimal, and
Week 8	MST
Week 9	MST
Week 10	Computer Codes: weighted and non-weighted code, BCD, EBCDIC, ASCII, Unicode, XS-3, Grey Codes
Week 11	Octal systems, conversion from one system to the other.
Week 12	Computer Software: Introduction, types of software, systems software, GUI, operating system, high level languages, assemblers, compilers and interpreters, system utilities, application packages
Week 13	Basic concepts of algorithm and flow charts: Flow charts, algorithm and decision tables, stages in the development of computer program, testing and debugging, program documentation. Internet Related Concepts: Internet, Uses of Internet, Basic services of Internet, Email, FTP, TELNET, and WWW.
Week 14	Familiarities with terms: HTTP, HTTPS, URL, Web Browsers, IP Address, Domain Name, ISP, Web Portal, Search Engines, Blog, Surfing, Wiki.
Week 15	Applications of Information Technology and Trends: IT in Business and Industry, IT in Education & training, IT in Science and Technology, IT and Entertainment, Current Trends in IT Application - AI, Virtual Reality, Voice Recognition, Robots, Multimedia Technology.
Week 16	E-Commerce: Meaning, its advantages & limitations, Infrastructure for E-commerce, Types of E-Commerce Applications.

Mangrutha

Jatinder Singh

Harpal

**Principal
Govt. College
Ropar**

Department of Computer Science (HEIS), Government College, Ropar
(2022-23)

Class BCA Sem. Ist Subject Programming in C- Language

Time Period	Topics to be Covered
Week 1	Programming Process: Problem definition, Algorithm development, Flowchart, Coding, Compilation and debugging.
Week 2	Basic structure of C program: History of C, Structure of a C program, Character set, Identifiers and keywords, constants, variables, data types.
Week 3	Control statements: branching statements (if, if else, switch), loop statements (for, while and do-while), jump statements (break, continue, goto), nested control structures.
Week 4	Functions: Library functions and user defined functions, prototype, definition and call, formal and actual arguments, local and global variables, methods of parameter passing to functions, recursion. I/O functions: formatted & unformatted console I/O functions
Week 5	Storage Classes: automatic, external, static and register variables.
Week 6	Arrays: – One dimensional and two dimensional arrays
Week 7	Declaration, initialization, reading values into an array, displaying array contents Strings: input/output of strings, string handling functions (strlen, strcpy, strcmp, strcat & strrev), table of strings.
Week 8	MST (Mid-Semester Test)
Week 9	MST (Mid-Semester Test)
Week 10	Structures and unions: using structures and unions, comparison of structure with arrays and union.
Week 11	Pointers: pointer data type, pointer declaration, initialization, accessing values using pointers,
Week 12	pointers and arrays.
Week 13	revision
Week 14	Introduction to Files in C: opening and closing files.
Week 15	Basic I/O operation on files.
Week 16	Queries from students

Teacher's Signature

Jatinder Singh
Principal
Govt. College
Ropar

HOD's Signature

SYLLABUS PLAN**CLASS : BCA-Sem-1 Sec-A****Subject : Fundamentals of Information Technology****Sep 2022 to Dec 2022**

Month	Topic
Sep (Month 1)	Week 1 Computer Fundamentals: Block diagram of a computer, characteristics of computers and generations of computers. Categories of Computers - Supercomputer, mainframe computer, network server,
	Week 2 Workstation, Desktop computers, notebook computer, Tablet PC, handheld PC, smart phone.
	Week 3 Input Devices: Keyboard, Mouse, Joy tick, Track Ball, Touch Screen, Light Pen, Digitized, Scanners, Speech Recognition Devices, Optical Recognition devices - OMR, OBR, OCR
	Week 4 Output Devices: Monitors, Impact Printers - Dot matrix, Character and Line printer, Non Impact Printers — DeskJet and Laser printers, Plotter.
Oct (Month 2)	Week 1 Memories: Memory Hierarchy, Primary Memory — RAM, ROM, Cache memory. Secondary Storage Devices - Hard Disk, Compact Disk, DC D, Flash memory. Software: Types of Software- System Softw'are. Application Software, Firmware.
	Week 2 Type of System Software: Operating Systems, Language Translators, Utility Programs. Communications Software. Commonly Used Application Software: Word Processor, Spreadsheet, Database, Education, Entertainment Software.
	Week 3 Computer Languages: Machine language, assembly language, high level language, 4GL. Number System: Non-positional and positional number systems, Base conversion, Concept of Bit and Byte, binary, decimal, hexadecimal, and octal systems, conversion from one system to the other.
	Week 4 Binary Arithmetic: Addition, subtraction and multiplication, 1's complement, 2's complement, subtraction using 1's complement and 2's complement. Computer Codes: weighted and <i>non-weighted</i> code. BCD, EBCDfC, ASCII, Unicode.
Nov (Month 3)	Week 1 Computer Network: Network types. network topologies. Internet Related Concepts: Internet. World Wide Web. Hypertext, Unifonn Resource Locator, Web Browsers, IP Address, Domain Name
	Week 2 Internet Services Providers, Internet Security, Web Search Engine, Net Surfing, web portal. Wiki, B log. Advanced Trends in IT : Mobile Internet. GPS, 3G, 4G, Wi-Fi, Bluetooth, Cloud Technology.

	Week 3 Virtual LAN Technology. Firewall, E-Commerce, M-Commerce, Nanotechnology, Virtual Reality, BPO and KPO, Online shopping. Social Media - YouTube, FaceBook, Linked in, Twitter, Google+.
	Week 4 Applications of IT: IT in Business and Industry, IT in Education & training, IT in Science and Technology, IT and Entertainment, Current Trends in IT Application - AI, Virtual Reports, voice recognition, Robots, Multimedia Technology.
Dec (Month 4)	Week 1 Revision
	Week 2 Revision

Harpreet Singh
HOD

Manpreet Singh
Manpreet Singh

Jatinder Singh
Principal
Govt. College
Ropar

Govt. College, Ropar
Computer Department (HEIS)
 Class B.C.A Sem. II
 (Session 2022-2023)

Week	Lesson scheduled
1 st	ਕਹਾਣੀ ਦੀ ਪਰਿਭਾਸ਼ਾ
2 nd	ਉਜਾੜ, ਘਰ, ਲੰਘਦਿਆਂ - ਵੜਦਿਆਂ ਕਹਾਣੀਆਂ ਦਾ ਸਾਰ, ਵਿਸ਼ਾ
3 rd	ਦਰਦ, ਕਸਤੂਰੀ, ਵਾਰਸ,
4 th	ਸੁੱਚਾ ਤਿੱਲਾ
5 th	ਸ਼ਬਦ ਸ਼੍ਰੇਣੀਆਂ ਦੀ ਪਰਿਭਾਸ਼ਾ
6 th	ਨਾਂਵ, ਪੜਨਾਂਵ, ਵਿਸ਼ੇਸ਼ਣ
7 th	ਸ਼ਬਦ ਬਣਤਰ
8 th	➤ MST
9 th	➤ MST
10 th	ਸੰਸਕਾਰ ਨਾਵਲ ਵਿਸ਼ਾ, ਸਾਰ, ਪਾਤਰ ਚਿਤਰਨ
11 th	ਸੰਸਕਾਰ ਨਾਵਲ ਵਿਸ਼ਾ, ਸਾਰ, ਪਾਤਰ ਚਿਤਰਨ
12 th	ਸੰਸਕਾਰ ਨਾਵਲ ਵਿਸ਼ਾ, ਸਾਰ, ਪਾਤਰ ਚਿਤਰਨ
13 th	ਸੰਸਕਾਰ ਨਾਵਲ ਪ੍ਰਸ਼ਨ
14 th	ਕਿਸਾਨੀ ਸੰਕਟ ਅਤੇ ਸੰਘਰਸ਼
15 th	ਪੰਜਾਬੀ ਗੀਤ ਚ ਹਿੰਸਾ

Gurpreet Kaur

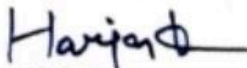
Teacher


Jatinder Singh
 Principal
 Govt. College
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LESSON PLAN	
CLASS: BCA SEM II	
Subject : General English- II	
Session: 2022-23	
Month	Topic
Feb(Month 1)	Week 3 Introduction to the syllabus A Talk on Advertising Globalisation
	Week 4 Work Brings Solace The Night the Bed Fell Rising Tide of the Urban Chaos
March (Month 2)	Week 1 More Than 100 Million Women are Missing, I Have A Dream Why I Want a Wife
	Week 2 Paragraph Writing
	Week 3 Grammar Exercise 38-44
	Week 4 Grammar Exercise 45- 50
April (Month 3)	Week 1 Grammar Exercise 51- 56
	Week 2 Grammar Exercise 57-62
	Week 3 Grammar Exercise 63-68
	Week 4 Grammar Exercise 82- 84
May (Month 4)	Week 1 Grammar Exercise 85- 87
	Week 2 Grammar Exercise 88- 91
	Week 3 Paragraph Writing
	Week 4 Revision
June (Month 5)	Week 1 Revision


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Department of Computer Science (HEIS), Government College, Ropar

(2022-23)

Class : BCA Sem. 2nd Subject :- Data Structure

Time Period	Topics to be Covered
Week 1	Basic concepts and notations: Types of data structures, Data structure operations,
Week 2	Mathematical notations and functions complexity
Week 3	Big 'O' notation, Time and space trade off.
Week 4	Arrays: Linear array, representation of array in memory, traversing linear array, insertion and deletion in an array, Two-dimensional array, row major and column major orders, sparse matrix.
Week 5	Stacks: Representation of stacks in memory (linked and sequential), operations on stacks, Applications of stacks: string reversal, parentheses matching.
Week 6	Queues: Representation of queues in memory (linked and sequential), operations on queues, insertion in rear, deletion from front.
Week 7	Linked list: Representation of linked list using static and dynamic data structures,
Week 8	MST
Week 9	MST
Week 10	Insertion and deletion of a node from linked list,
Week 11	searching in link list, searching in sorted link list.
Week 12	Trees: Definition and basic concepts, linked representation and representation in contiguous storage, binary tree
Week 13	binary tree traversal, Binary search tree, searching, insertion and deletion in binary search tree.
Week 14	Searching and sorting algorithms: Linear and binary search, bubble sort, insertion sort,
Week 15	selection sort, quick sort, merge sort.
Week 16	Queries from students

Teacher's Signature

Jalil Iqbal
Principal
Govt. College
Ropar

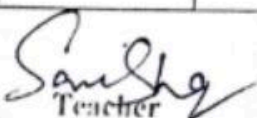
H. Singh
HOD's Signature

LESSON PLAN (2022-23)

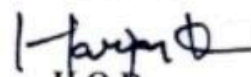
Class BCA 2nd sem

Subject digital electronics (123)

SESSION	TOPIC	REFERENCES
Week 1	Fundamental Concepts: Introduction to Analog and Digital Systems, Digital Signals, Basic Digital Circuits: AND, OR, NOT, NAND, NOR, XOR and XNOR gates..	
Week 2	Boolean algebra theorems, Characteristics of Digital IC	
Week 3	Number Systems: Positional and Non-positional number systems, Binary, Decimal, Octal and Hexadecimal, Base conversions..	
Week 4	Binary arithmetic: Addition and Subtraction, 1's complement, 2's complement, subtraction using 1's complement and 2's complement	
Week 5	Mid semester Test-I	
Week 6	Combinational Logic Design: SOP and POS Representation of Logic functions.	
Week 7	K-Map representation and simplification up to 4 variable expressions, Don't care condition.	
Week 8	Multiplexers: 4X1, 8X1 and 16X1, De-multiplexers: 1 to 4, 1 to 8 and 1 to 16, BCD to Decimal decoder, Decimal to BCD encoder, Parity generator and Parity checker, Design of Half adder and Full adder	
Week 9	Flip-Flops: Introduction, Latch, Clocked S-R Flip Flop, Preset and Clear signals, D-Flip Flop, J-K Flip Flop, The race-around condition	
Week 10	Master Slave J-K Flip Flop, D-Flip-Flop, Excitation Tables of Flip Flops, Edge-Triggered Flip Flops.	
Week 11	Mid semester Test-II	
Week 12	A/D and D/A Converters: Introduction, Digital to Analog Converters:	
Week 13	Weighted-Register D/A converter, R-2R Ladder D/A converter.	
Week 14	Analog to Digital Converters: Quantization and encoding,	
Week 15	Parallel-comparator A/D converter, Counting A/D converter.	
Week 16	Revision	


Teacher


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Govt. College
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H.O.D

Department of Computer Science (HEIS) Government College Ropar (2022-2023)
Class PGDCA(Sem. 2nd) Subject Database Management System with MS ACCESS

Time Period	Topics to be Covered
Week 1	Traditional File Processing System: Characteristics, Limitations, Database: Definition, Composition
Week 2	Database Management System (DBMS): Definition, Characteristics, Advantages over Traditional File Processing System, Users of Database
Week 3	DBA and its Responsibilities, Database Schema, Instance
Week 4	DBMS Architecture, Data Independence, Mapping between Different Levels
Week 5	Database Languages: DDL, DML, DCL, Database Utilities
Week 6	Data Models, Keys: Super, Candidate, Primary, Unique, Foreign
Week 7	Entity Relationship Model: Concepts, Mapping Cardinalities, Entity Relationship Diagram, Weak Entity Sets, Strong Entity Sets
Week 8	MST (Mid-Semester Test)
Week 9	MST (Mid-Semester Test)
Week 10	Overview of Network and Hierarchical Model
Week 11	Relational Data Model: Concepts, Constraints
Week 12	Relational Algebra: Basic Operations, Additional Operations, Introduction to Forms, Sorting and Filtering., Controls, Reports, and Macro: Creating Reports, Using Macros
Week 13	Database Design: Functional Dependency, Decomposition, Problems Arising Out of Bad Database Design, Normalization,
Week 14	Database Concurrency: Definition, Problems Arising Out of Concurrency, Database Security: Authentication,
Week 15	Authorization, Methods of Implementing Security, MS-ACCESS: Introduction to MS-ACCESS, Working with Database and Tables, Queries in Access, Applying Integrity Constraints
Week 16	Multi-valued Dependency, Database Design Process, Database Protection, Database Integrity


Teacher's Signature


HOD's Signature


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