

I.B. (PG) COLLEGE, PANIPAT

SESSION 2020-2021

Weekly Lesson Plan (Odd Semester)

(3rd Semester)

Name of the Paper:- Object Oriented Programming using Class: BCA II Year

Name of the Teachers (Section wise): Prof. VINAY BHARTI

WEEK	DATE	TOPICS
1	November (2 -3), (5 - 7)	
		Object oriented Programming: Object-Oriented programming features and benefits. Object-Oriented
		features of C++, Class and Objects, Data Hiding &
SUNDAY - 08.11.2020		
2	November (9-13)	
		Encapsulation, Structures, Data members and Member functions, Scope resolution operator and its significance
HOLIDAY - 14.11.2020 (Diwali)		
SUNDAY - 15.11.2020		
3	November (16-21)	
		Static Data Members, Static member functions,
SUNDAY - 22.11.2020		
4	November (23-28)	
		Nested and Local Class,
		Accessing Members of Class and Structure
SUNDAY - 29.11.2020		
HOLIDAY - 30.11.2020 (Guru Nanak Dev Jayanti)		
5	December (1-5)	
		Constructor, Initialization using constructor, types of constructor– Default, Parameterized & Copy Constructors
		Programs
SUNDAY - 06.12.2020		

6	December (07-12)	
		Revision (LOOPS)
		Programs
SUNDAY - 13.12.2020		
7	December (14-19)	
		Constructor overloading, Default Values to Parameters,
		Destructors
		Programs
SUNDAY - 20.12.2020		
8	December (21-24) (26)	
		Manipulators, Friend Function, Friend Class, Arrays,
		Programs
HOLIDAY - 25.12.2020 (Christmas)		
SUNDAY - 27.12.2020		
9	December (28-31) January (1-2)	
		Array of Objects, Passing and Returning Objects to Functions
		Programs
SUNDAY - 03.01.2021		
10	January (4-9)	
		String Handling in C++, Dynamic Memory Management:
		Pointers
		Assignment-I
SUNDAY - 10.01.2021		
11	January (11-16)	
		new and delete Operator, Array of Pointers to Objects,
		Programs
SUNDAY - 17.01.2021		

12	January (18-19) (21-23)	
		this Pointer, Passing Parameters to Functions by Reference & pointers.
		Programs
HOLIDAY - 20.01.2021 (Guru Gobind Singh Jayanti)		
SUNDAY - 24.01.2021		
13	January (25) (27-30)	
		Revision (Object & Classes)
		Conditional Test (Object & Classes)
HOLIDAY - 26.01.2021 (Republic Day)		
SUNDAY - 31.01.2021		
14	February (01-06)	
		Operators in C++, Precedence and Associativity Rules
		Assignment-II
SUNDAY - 07.02.2021		
15	February (08-13)	
		Operator Overloading, Unary & Binary Operators Overloading Programs
SUNDAY - 14.02.2021		
16	February (15 - 20)	
		Function Overloading, Inline Functions
		Revision

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(3rd Semester)

Name of the Paper:- Data Structures-I

Class: BCA II Year

Name of the Teachers (Section wise): Prof. ASHWANI GUPTA

WEEK	DATE	TOPICS
1	November (2 -3), (5 - 7)	
		Introduction: Elementary data organization,
		Data Structure definition, Data type vs. data structure,
		Categories of data structures,
SUNDAY - 08.11.2020		
2	November (9-13)	
		Introduction: Elementary data organization,
		Data Structure definition, Data type vs. data structure,
		Categories of data structures,
HOLIDAY - 14.11.2020 (Diwali)		
SUNDAY - 15.11.2020		
3	November (16-21)	
		Data structure operations, Applications of data structures,
		Algorithms complexity and time-space tradeoff.
SUNDAY - 22.11.2020		
4	November (23-28)	
		Strings: Introduction, Stroing strings, String operations,
		Pattern matching algorithms
SUNDAY - 29.11.2020		
HOLIDAY - 30.11.2020 (Guru Nanak Dev Jayanti)		
5	December (1-5)	
		Strings: Introduction, Stroing strings, String operations,
		Pattern matching algorithms
SUNDAY - 06.12.2020		

6	December (07-12)	
		Stack: Introduction, Array and linked representation of stacks
		, Operations on stacks, Applications of stacks: Polish notation, Recursion.
SUNDAY - 13.12.2020		
7	December (14-19)	
		Stack: Introduction, Array and linked representation of stacks
		Operations on stacks, Applications of stacks: Polish notation, Recursion.
SUNDAY - 20.12.2020		
8	December (21-24) (26)	
		Queues: Introduction, Array and linked representation of queues, Operations on queues, Deques, Priority Queues, Applications of queues.
HOLIDAY - 25.12.2020 (Christmas)		
SUNDAY - 27.12.2020		
9	December (28-31) January (1-2)	
		Queues: Introduction, Array and linked representation of queues, Operations on queues, Deques, Priority Queues, Applications of queues.
SUNDAY - 03.01.2021		
10	January (4-9)	
		Arrays: Introduction, Linear arrays, Representation of linear array in memory, Traversal, Insertions, Deletion in an array,
		Multidimensional arrays, Parallel arrays, Sparse matrices
SUNDAY - 10.01.2021		
11	January (11-16)	
		Linked List: Introduction, Array vs. linked list,
		Representation of linked lists in memory
SUNDAY - 17.01.2021		

12	January (18-19) (21-23)	
		Traversal, Insertion, Deletion, Searching in a linked list,
		Header linked list, Circular linked list, Two-way linked list,
HOLIDAY - 20.01.2021 (Guru Gobind Singh Jayanti)		
SUNDAY - 24.01.2021		
13	January (25) (27-30)	
		Traversal, Insertion, Deletion, Searching in a linked list,
		Header linked list, Circular linked list, Two-way linked list,
HOLIDAY - 26.01.2021 (Republic Day)		
SUNDAY - 31.01.2021		
14	February (01-06)	
		Tree: Introduction, Definition, Representing Binary tree in memory, Traversing binary trees, Traversal algorithms using stacks.
SUNDAY - 07.02.2021		
15	February (08-13)	
		Graph: Introduction, Graph theory terminology, Sequential and linked representation of graphs.
SUNDAY - 14.02.2021		
16	February (15 - 20)	
		Revision

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Weekly Lesson Plan (Odd Semester)

(3rd Semester)

Name of the Paper:- Computer Architecture

Class: BCA II Year

Name of the Teachers (Section wise): Prof. GEETIKA NARANG

WEEK	DATE	TOPICS
1	November (2 -3), (5 - 7)	
SUNDAY - 08.11.2020		
2	November (9-13)	
HOLIDAY - 14.11.2020 (Diwali)		
SUNDAY - 15.11.2020		
3	November (16-21)	
SUNDAY - 22.11.2020		
4	November (23-28)	
		Basic Computer Organisation and Design:Instruction Codes
		Continue
		Comuter Registers
		Continue
		Computer Instructions
SUNDAY - 29.11.2020		
HOLIDAY - 30.11.2020 (Guru Nanak Dev Jayanti)		
5	December (1-5)	Timing and Controls
		Continue
		Instruction Cycle
		Memory Refrence instruction
		Continue
SUNDAY - 06.12.2020		

6	December (07-12)	Input-Output & interrupt
		Design of Basic Computer
		Design of Accumulator logic
		Continue and Assignment 1
		Register Transfer and Microoperation: Register Transfer Language
		Continue and Class Test
SUNDAY - 13.12.2020		
7	December (14-19)	Register Transfer Bus and Memory Transfers
		Arithmetic Microoperations
		Logic Microoperations
		Continue
		Shift Microoperation
		Arithmetic Logic Shift Unit
SUNDAY - 20.12.2020		
8	December (21-24) (26)	Microprogrammed Control:Control Memory
		Continue
		Address sequencing microprogram sequencer
		Design of Control Unit
		Continue
HOLIDAY - 25.12.2020 (Christmas)		
SUNDAY - 27.12.2020		
9	December (28-31)	Continue
		Central Processing Unit:General Register Organisation
		Continue
	January (1-2)	Stack Organisation
		Continue,Class Test
		Instruction Format
SUNDAY - 03.01.2021		
10	January (4-9)	Addressing Modes
		Continue
		Data Transfer and Manipulation
		Program Control
		Continue
		Program Interrupt
SUNDAY - 10.01.2021		
11	January (11-16)	RISC
		CISC
		Continue
		Memory Organisation:Memory hierarchy
		Auxiliary Memory
		Associative Memory
SUNDAY - 17.01.2021		

12	January (18-19) (21-23)	Interleaved Memory
		Cache Memory
		Virtual Memory
		Memory Management Hardware
		Continue& Assignment 2
HOLIDAY - 20.01.2021 (Guru Gobind Singh Jayanti)		
SUNDAY - 24.01.2021		
13	January (25) (27-30)	Input Output Organisation:Peripheral Devices
		Input-Output Interface
		Asynchronous Data Transfer
		Modes of Transfer
		Continue
HOLIDAY - 26.01.2021 (Republic Day)		
SUNDAY - 31.01.2021		
14	February (01-06)	Priority Interrupt
		Conditional test
		Direct Memory Access
		Continue
		Continue
		Input Output Processor
SUNDAY - 07.02.2021		
15	February (08-13)	Continue
		Continue
		Revision
		Revision
		Revision
		Revision
SUNDAY - 14.02.2021		
16	February (15 - 20)	Revision
		Revision
		Revision
		Revision
		Revision
		Revision

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Weekly Lesson Plan (Odd Semester)

(3rd Semester)

Name of the Paper:- Object Oriented Programming using

Class: BCA II Year

Name of the Teachers (Section wise): Prof. AJMER SINGH

WEEK	DATE	TOPICS
1	November (2 -3), (5 - 7)	
SUNDAY - 08.11.2020		
2	November (9-13)	
HOLIDAY - 14.11.2020 (Diwali)		
SUNDAY - 15.11.2020		
3	November (16-21)	
SUNDAY - 22.11.2020		
4	November (23-28)	
SUNDAY - 29.11.2020		
HOLIDAY - 30.11.2020 (Guru Nanak Dev Jayanti)		
5	December (1-5)	
SUNDAY - 06.12.2020		

6	December (07-12)	
		Introduction: Program vs. Software
		Software Engineering
Software Crisis – problem and causes		
SUNDAY - 13.12.2020		
7	December (14-19)	
		Types of Programming paradigms
		Phases in Software development
Software Development Process Models		
SUNDAY - 20.12.2020		
8	December (21-24) (26)	
		Waterfall, Prototype, Evolutionary and Spiral models, Role of Metrics.
		Feasibility Study
		Software Requirement Analysis and Specifications
HOLIDAY - 25.12.2020 (Christmas)		
SUNDAY - 27.12.2020		
9	December (28-31) January (1-2)	
		Validation and Verification
		Software Configuration Management (SCM)
Structured Analysis and Tools		
SUNDAY - 03.01.2021		
10	January (4-9)	
		Entity-Relationship diagrams
		Cohesion and Coupling
Gantt chart, PERT Chart		
SUNDAY - 10.01.2021		
11	January (11-16)	
		Software Maintenance
		Maintenance characteristics.
Software Project Planning:		
SUNDAY - 17.01.2021		

12	January (18-19) (21-23)	
		COCOMO model
		Software configuration management
		Quality assurance plans
HOLIDAY - 20.01.2021 (Guru Gobind Singh Jayanti)		
SUNDAY - 24.01.2021		
13	January (25) (27-30)	
		Project monitoring plans
		Risk Management
		Software testing strategies:
HOLIDAY - 26.01.2021 (Republic Day)		
SUNDAY - 31.01.2021		
14	February (01-06)	
		Integration testing
		Validation testing
		System testing
SUNDAY - 07.02.2021		
15	February (08-13)	
		Alpha and Beta testing.
SUNDAY - 14.02.2021		
16	February (15 - 20)	

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Weekly Lesson Plan (Odd Semester)

(3rd Semester)

Name of the Paper:- DBMS

Class: BCA II Year

Name of the Teachers (Section wise): Prof. DEEPTY JUNEJA

WEEK	DATE	TOPICS
1	November (2 -3), (5 - 7)	BASIC CONCEPTS,FILE BASED APPROACH
		FILE BASED APPROACH & ITS LIMITATIONS
SUNDAY - 08.11.2020		
2	November (9-13)	DATABASE APPROACH & ITS CHARACTERSTIS
		DBMS & DBMS COMPONENT ENVIRONMENT
		DBMS FUNCTIONS & ITS COMPONENTS
HOLIDAY - 14.11.2020 (Diwali)		
SUNDAY - 15.11.2020		
3	November (16-21)	ADVANTAGE OF DBMS
		DISADVANTAGE OF DBMS
		DATA & DATABSE ADMINISTRATOR
SUNDAY - 22.11.2020		
4	November (23-28)	DATABASE DESIGNERS
		APPLICATION DEVELOPER & END USERS
		PROBLEM DISCUSSION
SUNDAY - 29.11.2020		
HOLIDAY - 30.11.2020 (Guru Nanak Dev Jayanti)		
5	December (1-5)	ASSIGNMENT I
		DATABASE SYSTEM ARCHITECTURE
SUNDAY - 06.12.2020		

6	December (07-12)	EXTELRNAL, INTERNAL,CONCEPTUAL LEVEL
		SCHEMAS, MAPPINGS & INSTANCES
		DATA INDEPENDANCE
SUNDAY - 13.12.2020		
7	December (14-19)	CLASSIFICATION OF DBMS
		PROBLEM DISCUSSION
		CLASS TEST
SUNDAY - 20.12.2020		
8	December (21-24) (26)	CENTERALIZED ARCHITECTURE TO DBMS
		CLIENT SERVER ARCHITECTURE TO DBMS
		GROUP DISCUSSION
HOLIDAY - 25.12.2020 (Christmas)		
SUNDAY - 27.12.2020		
9	December (28-31) January (1-2)	RECORD BASED , OBJECT BASED DATA MODEL
		PHYSICAL DATA MODEL & CONCEPTUAL MODELING
		E-R MODEL
SUNDAY - 03.01.2021		
10	January (4-9)	E-R MODEL
		PROBLEM DISCUSSION
		CONDITIONAL TEST
SUNDAY - 10.01.2021		
11	January (11-16)	Assignment2
		HISTORY, TERMINOLOGY IN RELATIONAL DATA STRUCTURE
		RELATIONS & ITS PROPERTIES
SUNDAY - 17.01.2021		

12	January (18-19) (21-23)	KEYS,DOMAIN
		INTEGRITY CONSTRAINTS OVER RELATION
HOLIDAY - 20.01.2021 (Guru Gobind Singh Jayanti)		
SUNDAY - 24.01.2021		
13	January (25) (27-30)	INTEGRITY CONSTRAINTS OVER RELATION
		INTEGRITY CONSTRAINTS OVER RELATION
HOLIDAY - 26.01.2021 (Republic Day)		
SUNDAY - 31.01.2021		
14	February (01-06)	BASE TABLE & VIEWS
		HIERARCHICAL MODEL
		HIERARCHICAL MODEL
SUNDAY - 07.02.2021		
15	February (08-13)	DISCUSSION
		NETWORK DATA MODEL
		NETWORK DATA MODEL
SUNDAY - 14.02.2021		
16	February (15 - 20)	Revision
		Revision
		Revision

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Weekly Lesson Plan (Odd Semester)

(3rd Semester)

Name of the Paper:- Numerical Analysis

Class: BCA II Year

Name of the Teachers (Section wise): Prof. ASHWANI GUPTA

WEEK	DATE	TOPICS
1	November (2 -3), (5 - 7)	Iterative Methods: Bisection, False position, Newton-Raphson method.
		Iteration method, discussion of convergence, Bairstow's method.
SUNDAY - 08.11.2020		
2	November (9-13)	Computer Arithmetic: Floating-point representation of numbers,
		arithmetic operations with normalized floating-point numbers and their
		consequences, significant figures
HOLIDAY - 14.11.2020 (Diwali)		
SUNDAY - 15.11.2020		
3	November (16-21)	Error in number representation-inherent error, truncation, absolute,
		relative, percentage and round-off error.
SUNDAY - 22.11.2020		
4	November (23-28)	Gauss-Elimination methods, pivoting, Ill-conditioned
		equations, refinement of solution. Gauss-Seidal iterative method
SUNDAY - 29.11.2020		
HOLIDAY - 30.11.2020 (Guru Nanak Dev Jayanti)		
5	December (1-5)	Gauss-Elimination methods, pivoting, Ill-conditioned
		equations, refinement of solution. Gauss-Seidal iterative method
SUNDAY - 06.12.2020		

6	December (07-12)	
		Euler method, Euler modified method, Taylor-series method, Runge-Kutta methods, Predictor-Corrector methods.
SUNDAY - 13.12.2020		
7	December (14-19)	
		Euler method, Euler modified method, Taylor-series method, Runge-Kutta methods, Predictor-Corrector methods.
SUNDAY - 20.12.2020		
8	December (21-24) (26)	
		Interpolation and Approximation:
		Polynomial interpolation: Newton, Lagranges, Difference tables, Approximation of functions by Taylor Series.
HOLIDAY - 25.12.2020 (Christmas)		
SUNDAY - 27.12.2020		
9	December (28-31) January (1-2)	
		Interpolation and Approximation:
		Polynomial interpolation: Newton, Lagranges, Difference tables, Approximation of functions by Taylor Series.
SUNDAY - 03.01.2021		
10	January (4-9)	
		Chebyshev polynomial: First kind, Second kind and their relations, Orthogonal properties
SUNDAY - 10.01.2021		
11	January (11-16)	
		Numerical Differentiation and integration: Differentiation formulae based on polynomial fit, pitfalls in differentiation
SUNDAY - 17.01.2021		

12	January (18-19) (21-23)	Numerical Differentiation and integration: Differentiation formulae based on polynomial fit, pitfalls in differentiation
HOLIDAY - 20.01.2021 (Guru Gobind Singh Jayanti)		
SUNDAY - 24.01.2021		
13	January (25) (27-30)	Trapezoidal & Simpson Rules, Gaussian Quadrature.
HOLIDAY - 26.01.2021 (Republic Day)		
SUNDAY - 31.01.2021		
14	February (01-06)	Trapezoidal & Simpson Rules, Gaussian Quadrature.
SUNDAY - 07.02.2021		
15	February (08-13)	Revision
SUNDAY - 14.02.2021		
16	February (15 - 20)	Revision