

Name: **KIRANPAL SINGH VIRK**  
 Subject: Paper – I : Data Structures (Monday, Tuesday, Wednesday)  
 Subject: Paper – II : Software Engineering (Thursday, Friday, Saturday)  
 Class and Section: **B.Sc. Computer Science (3<sup>rd</sup> Semester) Theory**

Week	Date	Topic
2	13-Jul-18	Introduction: Program vs. Software, Software Engineering,
	14-Jul-18	Programming paradigms
	15-Jul-18	<b>Sunday</b>
3	16-Jul-18	Introduction: Elementary data organization
	17-Jul-18	Data Structure definition, Data type vs. data structure
	18-Jul-18	Categories of data structures, Data structure operations,
	19-Jul-18	Software Crisis – problem and causes, Phases in Software development
	20-Jul-18	Requirement Analysis, Software Design,
	21-Jul-18	Coding, Testing, Maintenance,
	22-Jul-18	<b>Sunday</b>
4	23-Jul-18	Applications of data structures
	24-Jul-18	Algorithms complexity and time-space tradeoff, Big-O notation
	25-Jul-18	Strings: Introduction, String operations
	26-Jul-18	Software Development Process Models: Waterfall
	27-Jul-18	Prototype
	28-Jul-18	Evolutionary
	29-Jul-18	<b>Sunday</b>
5	30-Jul-18	String operations
	31-Jul-18	<b>Shaheed Udham Singh's Martyrdom Day</b>

Week	Date	Topic
1	1-Aug-18	String operations
	2-Aug-18	Spiral model
	3-Aug-18	Role of Metrics
	4-Aug-18	Feasibility Study
	5-Aug-18	<b>Sunday</b>
2	6-Aug-18	Pattern matching algorithms
	7-Aug-18	Pattern matching algorithms
	8-Aug-18	Pattern matching algorithms
	9-Aug-18	SRS, Need for SRS, Characteristics of an SRS

	10-Aug-18	SRS, Need for SRS, Characteristics of an SRS
	11-Aug-18	Components of an SRS, Problem Analysis,
	12-Aug-18	<b>Sunday</b>
<b>3</b>	13-Aug-18	Arrays: Introduction, Linear arrays, Representation of linear array in memory, Traversal,
	14-Aug-18	Insertions, Deletion in an array, Multidimensional arrays
	15-Aug-18	<b>Independence Day</b>
	16-Aug-18	
	17-Aug-18	
	18-Aug-18	
	19-Aug-18	<b>Sunday</b>
<b>4</b>	20-Aug-18	Parallel arrays, Sparse matrix
	21-Aug-18	Linked List: Introduction, Array vs. linked list, Representation of linked lists in memory,
	22-Aug-18	<b>Id-Ul-Zuha</b>
	23-Aug-18	Information gathering tools
	24-Aug-18	Information gathering tools
	25-Aug-18	Organizing and structuring information
	26-Aug-18	<b>Sunday</b>
<b>5</b>	27-Aug-18	Traversal, Insertion, Deletion, Searching in a linked list
	28-Aug-18	Header linked list, Circular linked list
	29-Aug-18	Two-way linked list,
	30-Aug-18	Requirement specification,
	31-Aug-18	Requirement specification,

<b>Week</b>	<b>Date</b>	<b>Topic</b>
<b>1</b>	1-Sep-18	validation and metrics
	2-Sep-18	<b>Sunday</b>
<b>2</b>	3-Sep-18	<b>Janmashtmi</b>
	4-Sep-18	Garbage collection, Applications of linked lists.
	5-Sep-18	Algorithm of insertion/ deletion in SLL
	6-Sep-18	Structured Analysis and Tools: Data Flow Diagram,
	7-Sep-18	Data Dictionary
	8-Sep-18	Decision table
	9-Sep-18	<b>Sunday</b>

<b>3</b>	10-Sep-18	Algorithm of insertion/ deletion in SLL
	11-Sep-18	Stack: primitive operation on stack, algorithms for push and pop
	12-Sep-18	Representation of Stack as Linked List and array
	13-Sep-18	Decision trees
	14-Sep-18	Structured English
	15-Sep-18	Entity-Relationship diagrams
	16-Sep-18	<b>Sunday</b>
<b>4</b>	17-Sep-18	Stacks applications : polish notation
	18-Sep-18	recursion
	19-Sep-18	Introduction to queues, Primitive Operations on the Queues
	20-Sep-18	Entity-Relationship diagrams
	21-Sep-18	Entity-Relationship diagrams
	22-Sep-18	Software Project Planning: Cost estimation: COCOMO model
	23-Sep-18	<b>Sunday</b>
<b>5</b>	24-Sep-18	Circular queue, Priority queue, Representation of Queues as Linked List
	25-Sep-18	Representation of Queues as array, Applications of queue
	26-Sep-18	Algorithm on insertion and deletion in simple queue
	27-Sep-18	Software Project Planning: Cost estimation: COCOMO model
	28-Sep-18	Software Project Planning: Cost estimation: COCOMO model
	29-Sep-18	Software Project Planning ,Cost estimation: COCOMO model
	30-Sep-18	<b>Sunday</b>

<b>Week</b>	<b>Date</b>	<b>Topic</b>
<b>1</b>	1-Oct-18	Algorithm on insertion and deletion in circular queue
	2-Oct-18	<b>Mahtma Gandhi Jyanti</b>
	3-Oct-18	Algorithm on insertion and deletion in circular queue
	4-Oct-18	Cost estimation: COCOMO model
	5-Oct-18	Project scheduling, Staffing and personnel planning, team structure,
	6-Oct-18	Software configuration management, Quality assurance plans, Project monitoring plans, Risk Management
	7-Oct-18	<b>Sunday</b>
<b>2</b>	8-Oct-18	Trees - Basic Terminology, representation,
	9-Oct-18	Trees - Basic Terminology, representation, Binary Trees

	10-Oct-18	<b>Maharaja Agrasen Jyanti</b>
	11-Oct-18	Software configuration management, Quality assurance plans, Project monitoring plans, Risk Management
	12-Oct-18	Software testing strategies: unit testing, integration testing, V and V
	13-Oct-18	Software testing strategies: unit testing, integration testing, V and V
	14-Oct-18	<b>Sunday</b>
<b>3</b>	15-Oct-18	Tree Representations using Array & Linked List
	16-Oct-18	Tree Representations using Array & Linked List
	17-Oct-18	Basic operation on Binary tree, Traversal of binary trees:- In order, Preorder & post order,
	18-Oct-18	<b>Dussehra</b>
	19-Oct-18	System testing, Alpha and Beta testing
	20-Oct-18	Black box
	21-Oct-18	<b>Sunday</b>
<b>4</b>	22-Oct-18	Basic operation on Binary tree, Traversal of binary trees:- In order, Preorder & post order,
	23-Oct-18	Basic operation on Binary tree, Traversal of binary trees:- In order, Preorder & post order,, Applications of Binary tree.
	24-Oct-18	<b>Maharishi Valmiki's Birthday</b>
	25-Oct-18	white box testing
	26-Oct-18	Cyclomatic Complexity
	27-Oct-18	Software Implementation and Maintenance: Type of maintenance
	28-Oct-18	<b>Sunday</b>
<b>5</b>	29-Oct-18	Algorithm of tree traversal with and without recursion
	30-Oct-18	Algorithm of tree traversal with and without recursion
	31-Oct-18	Introduction to graphs, Definition, Terminology, Directed, Undirected & Weighted graph, Representation of graphs.

<b>Week</b>	<b>Date</b>	<b>Topic</b>
<b>1</b>	1-Nov-18	<b>Haryana Day</b>
	2- Nov -18	Type of maintenance, Management of Maintenance
	3- Nov -18	Maintenance Process, maintenance characteristics.
	4- Nov -18	<b>Sunday</b>
<b>2</b>	5- Nov -18	Introduction to graphs, Definition, Terminology, Directed, Undirected & Weighted graph, Representation of graphs.