

कार्यालय प्राचार्य, शासकीय पॉलीटेक्निक जशपुर (छ. ग.)

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LESSON PLAN SESSION JUL – DEC 2025

SUBJECT: **DATA STRUCTURE** SEMESTER: **3RD** BRANCH: - **COMPUTER SCIENCE & ENGINEERING**

UNIT NUMBER	NAME OF THE TOPIC	NO OF CLASS REQUIRED	REMARK
UNIT 01: Introduction to Java & Programming Structure	1.1 : Introduction to Java	01	
	1.2 yrotsiH ERJ ,KDJ ,MVJ , .1.1 2 &noitalipmoCavaJnoitaterpretnI	02	
	1.3 Declaring and initializing One- Dimensional Array and array Operations Insertion, Searching	02	
	1.4 Multi-Dimensional Array and its Operations- Matrix operations	02	
	1.5 Drawbacks of Linear Arrays	01	
	1.6 Introduction character array and string.		
Unit 02: Stack and Queue	2.1 Introduction to stack, 2.2 Implementation of stack	01	
	2.3 Operations on Stack, 2.3.1 Push, 2.3.2 Pop		
	2.4 Application of Stack, 2.4.1 Expression Evaluation	01	
	2.4.2 Infix to Postfix	01	
	2.4.3 Infix to Prefix	01	
	2.4.4 Recursion	01	
	2.5 Introduction to Queue, 2.6 Types of queue	01	
	2.6.1 Single Ended Queue		
2.6.2 Circular Queue	01		
2.6.3 Double Ended Queue.	01		
2.7 Implementation of Queue, 2.8 Application of Queue	01		
Unit 03: Pointers, Structure and Union in 'C'	3.1 Introduction and Features of Pointers	01	
	3.2 Declaration of Pointer		
	3.3 Operations on Pointers	01	
	3.4 Array of Pointers		
	3.5 Pointers to Pointers	01	
	3.6 Passing array to function	01	
	3.7 Introduction and Features of Structure & Union	01	
	3.8 Declaration of Structure & Union	01	
3.9 Operations on Structure	01		
Unit 04: Linked List	4.1 Introduction of Linked List, 4.1.1 node, 4.1.2 next address, 4.1.3 pointer, 4.1.4 null pointer	02	
	4.2 Types of Linked List, 4.2.1 Singly Linked List	01	
	4.2.2 Doubly Linked List, 4.2.3 Circular Linked List	01	
	4.3 Operations on Linked List: 4.3.1 Searching	01	
	4.3 Operations on Linked List: 4.3.2 insertion	01	
	4.3 Operations on Linked List: 4.3.3 Deletion	01	
4.4 Applications of Linked List	01		
Unit 05: Graph and Tree	5.1 Definition of graph, 5.2 Representation of graph	01	
	5.2.1 Adjacency Matrix	01	
	5.2.2 Incidence Matrix, 5.2.3 Adjacency List	01	
	5.3 Introduction to Tree, 5.4 Type of tree	02	
	5.4.1 Binary Tree		
	5.4.2 Binary Search Tree (BST)	01	
	5.5 Operation on BST 5.5.1 Insertion		
	5.5.2 Deletion	01	
5.5.3 Traversing	01		
Total Class Required		40	

Lecturer Name & Sign: - KAMLESH KUMAR SAHU
LECTURER, CSE, GPJ

HODCSE Sign: -