

**INTRODUCTION TO DATA STRUCTURES AND ALGORITHM
(OPEN ELECTIVE)**

(Effective from the academic year 2018 -2019)

SEMESTER – VI

Subject Code	18CS652	CIE Marks	40
Number of Contact Hours/Week	3:0:0	SEE Marks	60
Total Number of Contact Hours	40	Exam Hours	3 Hrs

CREDITS –3

Course Learning Objectives: This course will enable students to:

- Identify different data structures in C programming language
- Appraise the use of data structures in problem solving
- Implement data structures using C programming language.

	Contact Hours
Introduction to C, constants, variables, data types, input output operations, operators and expressions, control statements, arrays, strings, built-in functions, user defined functions, structures, unions and pointers Text Book 1: Chapter 1 and 2 RBT: L1, L2	08
Module 2	
Algorithms, Asymptotic notations, introduction to data structures, types of data structures, Arrays. Text Book 1: Chapter 3 and 4 RBT: L1, L2	08
Module 3	
Linked lists, Stacks Text Book 1: Chapter 5 and 6 RBT: L1, L2	08
Module 4	
Queues, Trees Text Book 1: Chapter 7 and 8 RBT: L1, L2	08
Module 5	
Graphs, Sorting ,(selection, insertion, bubble, quick)and searching(Linear, Binary, Hash) Text Book 1: Chapter 9 and 10 RBT: L1, L2	08

Course Outcomes: The student will be able to :

- Identify different data structures in C programming language
- Appraise the use of data structures in problem solving
- Implement data structures using C programming language.

Question Paper Pattern:

- The question paper will have ten questions.
- Each full Question consisting of 20 marks
- There will be 5 full questions (with a maximum of four sub questions) from each module.
- Each full question will have sub questions covering all the topics under a module.
- The students will have to answer 5 full questions, selecting one full question from each module.

Textbooks:

1. Data structures using C , E Balagurusamy, McGraw Hill education (India) Pvt. Ltd, 2013.

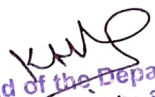
Reference Books:

1. Ellis Horowitz and Sartaj Sahni, Fundamentals of Data Structures in C, 2nd Ed, Universities Press, 2014.
2. Seymour Lipschutz, DATA STRUCTURES THROUGH OUTLINES, REVISIO 1ST ED, MCGRAW HILL, 2014.

training/android-developer-fundamentals-course-concepts/details (Download pdf file from the above link)

Reference Books:

1. Erik Hellman, "Android Programming – Pushing the Limits", 1st Edition, Wiley India Pvt Ltd, 2014.
2. Dawn Griffiths and David Griffiths, "Head First Android Development", 1st Edition, O'Reilly SPD Publishers, 2015.
3. J F DiMarzio, "Beginning Android Programming with Android Studio", 4th Edition, Wiley India Pvt Ltd, 2016. ISBN-13: 978-8126565580
4. Anubhav Pradhan, Amit V Deshpande, "Composing Mobile Apps using Android, Wiley 2014, ISBN. 978-81-265-4660-2


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