



Jyothy Charitable Trust®

## Jyothy Institute of Technology

Tataguni, off Kanakapura road, Bengaluru-560082

Approved by The All India Council for Technical Education (AICTE) - New Delhi;

Affiliated to Visvesvaraya Technological University (VTU), Belagavi;

### Department of Computer Science & Engineering

Accredited by National Board of Accreditation (NBA) -New Delhi.

#### EXHAUSTIVE QUESTION BANK

<b>Batch</b>	<b>2022 - 2026</b>		
<b>Year/Semester/Section</b>	<b>2<sup>nd</sup>/3<sup>rd</sup>/B</b>		
<b>Course Code -Title</b>	<b>BCS304 - Data Structures and Applications</b>		
<b>Module No. -Title</b>	<b>Linked Lists, Queues</b>		
<b>Name of the Course In charge</b>	<b>Mrs. Prathibha KN</b>	<b>Designation</b>	<b>Asst. Prof.</b>

QNo.	Question	COs	RBT
1	Define queue. List the different types of queues. State the limitation of ordinary queue and explain how do you overcome this limitation with an example.	CO2	L1
2	Describe the various operations on circular queues using arrays and dynamic arrays.	CO2	L1
3	Write a C function CQInsert() and CQDelete() operations on circular queue.	CO2	L1
4	Explain operations on Multiple Stacks and queues with an example.	CO2	L1
5	Define linked list. List and describe the different types of linked lists with a neat diagram	CO3	L2
6	Differentiate between singly linked list and doubly linked list	CO3	L2
7	Develop C functions to implement different operations of stacks and queues using linked lists.	CO3	L2
8	Write the function for the following operations on singly linked list: 1) Insert_front(). 2) Insert_rear(). 3) Delete_front(). 4) Delete_rear(). 5) Display()	CO3	L2
9	Write a C function to add 2 polynomials using linked lists.	CO3	L3

10	Write the node structure for linked representation of polynomial. Write the function to add 2 polynomials and represent it with linked list.	CO3	L3
11	Write a program to add 2 polynomials using linked list. Also represent given polynomial using circular singly linked list : $p(x,y,z) = 6x^2y^2z^2 - 4y^2z^2 + 3x^3yz + 2xy^5z - 2xyz^3$ .	CO3	L3
12.	Explain how do you represent Chains using Linked lists.	CO3	L3

**Course In charge**

**DAEC**

**HOD**

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