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Roll No.

(Printed Pages 4)

Paper Code - 328103

B.Sc. 3rd Sem. Examination, Dec.-2022

Computer Science (Data Structure Using C)

Code : 303

Time : Three Hours] [Maximum Marks : 75

Note : Attempt all the Sections as per instructions.

Section-A

Note : Attempt all the five questions. Each question carries 03 marks. $3 \times 5 = 15$

1. What do you understand by Data Structure?
2. What is time complexity?

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3. What do you understand by data types?
4. What is hashing?
5. What is Garbage collection.

Section-B

Note : Attempt any two questions out of the following three questions. Each question carries $7\frac{1}{2}$ marks.

$7\frac{1}{2} \times 2 = 15$

6. What do you understand by Recursion in "C"? Explain with its suitable example?
7. What is linked list? Explain with the suitable example and its types?
8. What is the difference between stack and queue? Explain with the suitable example?

328103/2

Section-C

Note : Attempt any **three** questions out of the following five questions. Each question carries 15 marks. $15 \times 3 = 45$

9. What is binary tree? Write the properties, applications and representation of binary tree? <https://www.msustudy.com>
10. What do you understand by selection sort? Explain the algorithm for selection sort and give a suitable example?
11. What is BST? Explain various operations on BST with an example?
12. What do you understand by an "Array"? How are the elements of a 2D array stored in the memory?

13. What are the advantages of a linked list over an array? In which scenarios do we use link list and when array?

328103/3

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