

BACHELOR OF TECHNOLOGY (CBCS) (2021-COURSE)
B. Tech. Sem - III COMPUTER SCIENCE & ENGINEERING : SUMMER : 2024
SUBJECT: NON-LINEAR DATA STRUCTURES

Day : Wednesday

Time : 02:30 PM-05:30 PM

Date : 08/05/2024

S-25310-2024

Max. Marks : 60

N.B.

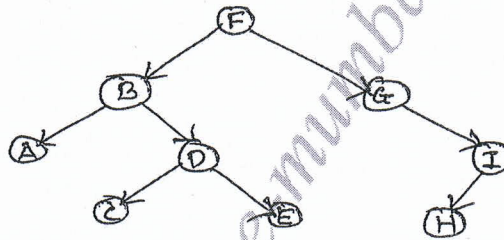
- 1) All questions are **COMPULSORY**.
- 2) Figures to the **RIGHT** indicate **FULL** marks.
- 3) Assume suitable data, if necessary.
- 4) Draw neat and labeled diagrams, **wherever** necessary.

Q.1 Discuss AND/OR graphs, explain with example. (10)

OR

Q.1 Define Nonlinear Data structure. Differentiate between Linear and Nonlinear data structure. Explain any one types of Nonlinear data structure. (10)

Q.2 Find the solutions for different tree traversal methods on the following figure. (10)



OR

Q.2 Explain Threaded binary trees with suitable examples. Also give advantages and disadvantages of the same. (10)

Q.3 Comment on Characteristic, Insertion and Deletion operations on B+ trees. (10)

OR

Q.3 What are Multi-way Search Trees? Explain detail. (10)

Q.4 Explain Heap data structure with advantages, disadvantages and applications. (10)

OR

Q.4 Differentiate between Tree and Heap with proper example. (10)

Q.5 What are the commonly used types of Hashing? (10)

OR

Q.5 What is Rehashing, why Rehashing is needed and how it is done? (10)

Q.6 Comment on Pattern Searching using Suffix Tree. (10)

OR

Q.6 How to search a pattern in the built suffix trees? Give applications of the suffix trees. (10)

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