

Total No. of Questions : 8]

[Total No. of Printed Pages : 2

Roll No

MCADD-703

M.C.A. (Integrated), VII Semester

Examination, November 2023

File Structures

Time : Three Hours

Maximum Marks : 70

- Note :** i) Attempt any five questions.
ii) All questions carry equal marks.

1. a) Explain Physical Files and Logical Files.
b) Make a list of the different ways to perform the file operations Create, Open, Close, Read and Write. Why is there more than one way to do each operation?
2. a) What is the disk access? Explain each factors that contributing to calculate the time need to access a file on a disk.
b) Discuss the Organization of data on nine track tapes.
3. a) Explain the buffer class for delimited text fields.
b) List and explain Unix tools for sequential processing.
4. a) What is data compression? List different ways for data compression and explain any one of them.
b) What is the difference between internal and external fragmentation? How can compaction affect the amount of internal fragmentation in a file?

[2]

5. a) What is redundancy reduction? Why is run-length encoding an example of redundancy reduction?
b) What are the operations required to maintain an index file?

6. a) Construct the step to configure a B-tree of order 5 for the following data:
A,G,F,B,K,D,H,M,J,E,S,I,R,X,C,L,N,T,U,P
b) Compare B-tree, Simple prefix B+ trees and B+ tree.

7. a) Describe the collision resolution by progressive overflow method with an example.
b) Discuss the working principle of extendible hashing.

8. Explain following in brief:
 - i) Virtual Method
 - ii) Metadata
 - iii) Binding
 - iv) Inverted list
