Sant Gadge Baba Amravati University,Amravati Summer -2020 Examination
HVP Mandal's College of Engineering and Technology , Amravati
Course: Computer Science and Engineering

BE Four Year Fifth Semester (Computer Science and Engineering) Summer 2020 Exam
5KS02 /5KE02 FILE STRUCTURES & DATA PROCESSING

Assignment ONLY FOR BACKLOG STUDENTS

Marks: 20

Note:
1. Solve any Two Questions.
2. Each Question carries 10 Marks.

Question No.1 (10 Marks)

A. The _____ is the fastest and most costly form of storage, which is relatively small; its use is managed by the computer system hardware. a) Cache b) Disk c) Main memory d) Flash memory   (1) B. Explain different methods of field structures.   (2) C. Differentiate between Internal Fragmentation & External Fragmentation.   (2) D. What can be done to improve Merge sort performance.   (2) E. Why AVL tree is called a height-balanced 1-tree or HB(1) tree.   (2) F. The searching technique that takes O (1) time to find a data is a) Linear Search b) Binary Search c) Hashing d) Tree Search   (1)

Question No.2 (10 Marks)

A. Differentiate Between Disk and Tape.   (2) B. A relative block number is an index relative to _____ a) the beginning of the file   b) the end of the file c) the last written position in file   d) none of the mentioned   (1) C. For Best-Fit Strategy: Avail List: size=10, size=22, size=50, size=60 Record to be added: size=20 Which record from Avail List is used for the new record ?   (2) D. Explain Selection sort.   (2) E. What properties B tree should have.   (2) F. Define Double Hashing   (1)

Question No.3 (10 Marks)

A. Which of the following is a physical storage media?	
a) Tape Storage b) Optical Storage c) Flash memory d) All of the mentioned	(1)
B. Explain with example Unix tools for sequential processing	(2)
C. Define Inverted list.	(2)
D. Explain Consequential operation.	(2)
E. Explain Properties of a B+ Tree.	(2)
F. What is the best definition of a collision in a hash table?	
a) Two entries are identical except for their keys	
b) Two entries with different data have the exact same key	
c) Two entries with different keys have the same exact hash value	
d) Two entries with the exact same key have different hash values	(1)

Question No.4 (10 Marks)

A. Explain strength and weakness of CD-ROM.	(2)
B. What is metadata? Explain with example.	(2)
C. What is binding.	(2)
D. Draw Heap tree using Heap Building Algorithm for input key order : F D C G H B E A	(2)
E. In case the indices values are larger, index is created for these values of the index.	
This is called a) Pointed index b) Sequential index c) Multilevel index d) Multiple index	(1)
F. Define Dynamic Hashing.	(1)