

Q1 Academic Honesty

1 Point

It is a violation of the Academic Integrity Code to look at any reference material other than your textbook and lecture notes, or to give inappropriate help to someone or to receive unauthorized aid by someone in person or electronically via messaging apps such as WhatsApp. Academic Integrity is expected of all students of Hacettepe University at all times, whether in the presence or absence of members of the faculty. Do NOT sign nor take this exam if you do not agree with the honor code.

Understanding this, I declare I shall not give, use or receive unauthorized aid in this examination.

Signature (Specify your name and surname as your signature)

Mehmet Taha USTA MTUSTA

While answering the following questions, please consider the content that we discussed in our lectures unless stated otherwise.

Q2

6 Points

Which of the following is the efficient data structure for searching words in dictionaries?

- ☐ BST
- ☐ Linked List
- ☐ Balanced BST
- ☒ Trie

Q3

6 Points

6. Which of the following is not true?

- ☒ Trie requires less storage space than a hash table
- ☐ Trie allows listing of all the words with the same prefix
- ☐ Tries are collision-free
- ☐ Trie is also known as a prefix tree

Q4

6 Points

Auto complete and spell checkers can be implemented efficiently using the trie.

- ☒ True
- ☐ False

Q5

7 Points

If you populate a Trie with the following strings and terminate each string with '\0' character, what is the number of nodes in the final structure?

science
scientific
storage
data
database

31

Q6

6 Points

A priority queue has a first-in first-out order of operations.

- ☐ True
- ☒ False

Q7

4 Points

In the priority queue, can both insert and findMin be implemented in constant time?

- ☐ True
- ☒ False

Q8

6 Points

What is the minimum number of items that must be exchanged during deleteMin in a heap of size n with no duplicate keys?

(heap Height)-1

Quiz 6

GRADED

STUDENT

MEHMET TAHA USTA

TOTAL POINTS

29 / 42 pts

QUESTION 1

Academic Honesty

1 / 1 pt

QUESTION 2

(no title)	6 / 6 pts
QUESTION 3	
(no title)	6 / 6 pts
QUESTION 4	
(no title)	6 / 6 pts
QUESTION 5	
(no title)	0 / 7 pts
QUESTION 6	
(no title)	6 / 6 pts
QUESTION 7	
(no title)	4 / 4 pts
QUESTION 8	
(no title)	0 / 6 pts