Dashboard / My courses / CA308_A&B&C / Unit I / Unit Exam 1				
Question 2 Not yet answered Marked out of 1.00				
A list of 8 string, each of length n, is sorted into lexicographic order using the merge-sort algorithm. The worst case running time of this computation is				
○ a. 24○ b. 192○ c. 65				
O d. 68 CLEAR MY CHOICE				
Question 3 Answer saved Marked out of 1.00				
Heap is defined to be a				
 a. tree structure b. binary tree c. binary search tree d. complete binary tree CLEAR MY CHOICE				
Question 4 Answer saved Marked out of 1.00				
In a Max heap the largest key is at				
 a. a node b. the root c. a leaf d. a right node 				
CLEAR MY CHOICE				

Question **5**Answer saved
Marked out of 1.00

In quick sort, the number of partitions into which the file of size n is divided by a selected record is

a. 2

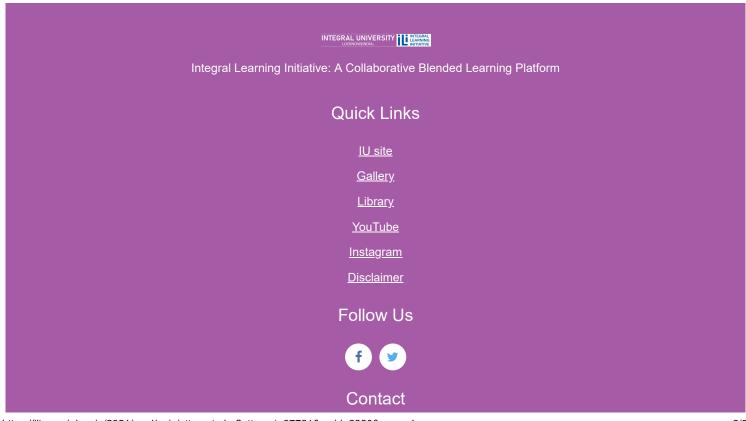
○ b. n - 1

O c. n

O d. none of the above

CLEAR MY CHOICE

◄ FOCUSED DISCUSSION FORUM UNIT 1



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Question 6 Answer saved Marked out of 1.00
Quick sort efficiency can be improved by adopting
○ a. tree search method
b. non-recursive method
○ c. insertion method
○ d. All of the above
CLEAR MY CHOICE
_
Question 7
Answer saved
Marked out of 1.00
Selection sort and quick sort both fall into the same category of sorting algorithms. What is this category?
b. Divide-and-conquer sorts
○ c. Average time is quadratic
○ d. O(n log n) sorts
CLEAR MY CHOICE
Question 8 Answer saved
Marked out of 1.00
The algorithm like Quick sort does not require extra memory for carrying out the sorting procedure. This technique is called
○ a. stable
b. In place
○ c. unstable
O d. in-partition
CLEAR MY CHOICE

Question 9		
Answer saved		
Marked out of 1.00		

The concept of order Big O is important because

- o a. middleware.
- \bigcirc b. It is the lower bound of the growth rate of algorithm
- O c. It determines the maximum size of a problem that can be solved in a given amount of time
- od. It can be used to decide the best algorithm that solves a given problem

CLEAR MY CHOICE

Question 10

Answer saved

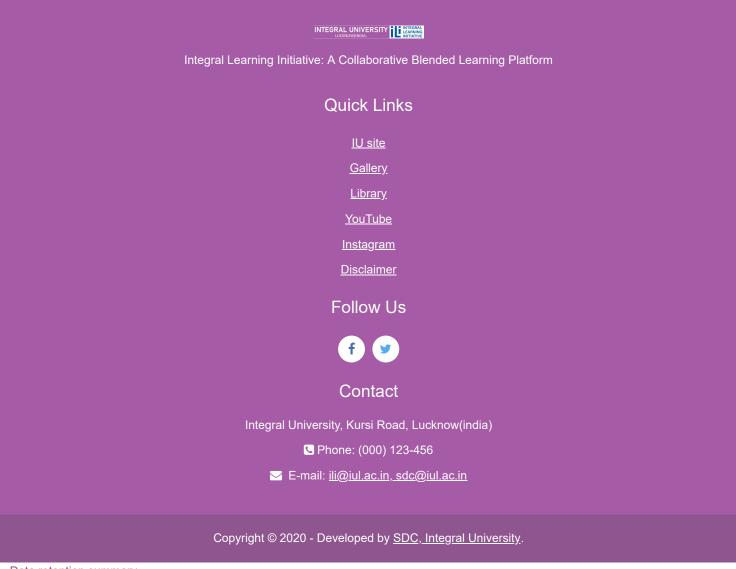
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The recurrence relation capturing the optimal execution time of the Towers of Hanoi problem with n discs is

- \bigcirc a. T = 2T(n 2) + 2
- \bigcirc b. $T_{?} = 2T(n-1) + n$
- c. T = 2T(n-1)+1
- \bigcirc d. T = 2T(n/2) + 1

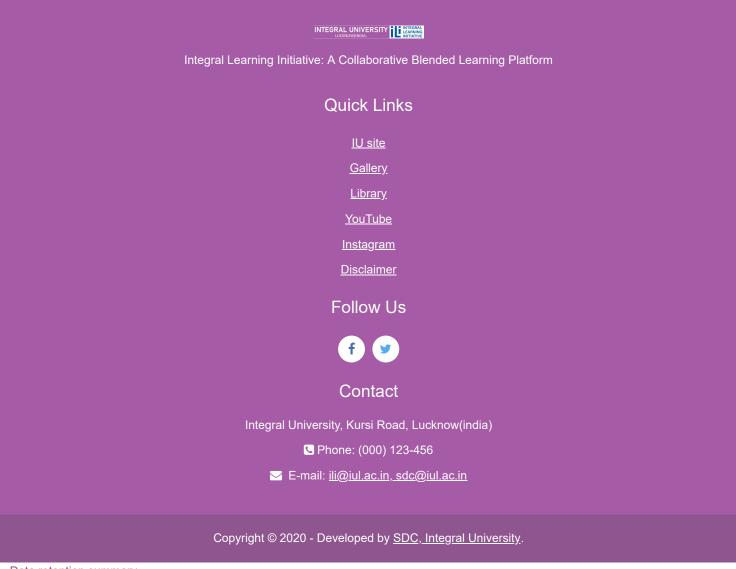
CLEAR MY CHOICE

◀ FOCUSED DISCUSSION FORUM UNIT 1



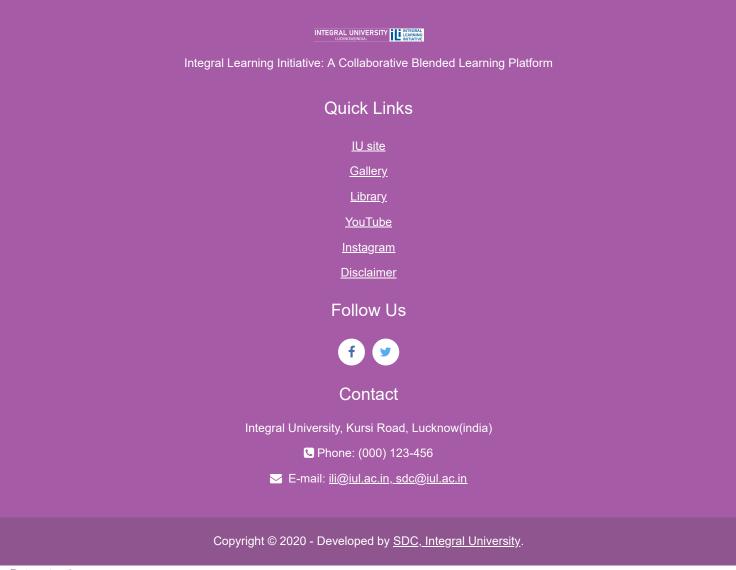
Dashboard / My courses / CA308_A&B&C / Unit I / Unit Exam 1		
Question 11		
Answer saved		
Marked out of 1.00		
The running time of insertion sort is		
○ b. O ?		
○ c. O(log n)		
○ d. O(nlog n)		
CLEAR MY CHOICE		
Question 12		
Answer saved		
Marked out of 1.00		
the time complexity of the Recurrence relation T = 2T(n/2) + O = is a. O → b. O(n^2) c. O(logloglogn) d. None of the above CLEAR MY CHOICE		
Question 13		
Answer saved		
Marked out of 1.00		
the time complexity of the Recurrence relation $T^{P} = T(n-1) + O^{P}$ is		
○ a. O(n^2)		
○ c. O(nlogn)		
○ d. All of the above		
CLEAR MY CHOICE		

Question 14	
Answer saved	
Marked out of 1.00	
The time factor when determining the efficiency of algorithm is measured by	
○ a. Counting the kilobytes of algorithm	
○ b. Counting microseconds	
○ c. Counting the number of statements	
d. Counting the number of key operations	
CLEAR MY CHOICE	
Question 15	
Answer saved	
Marked out of 1.00	
The worst-case time complexity of Bubble Sort is	
a. O(nlogn)	
b. O(n^2)	
o. c. O(n^3)	
○ d. O(logn)	
CLEAR MY CHOICE	
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Question 16			
Answer saved			
Marked out of 1.00			
The worst-case time complexity of Merge Sort is			
○ a. O(loglogn)			
○ b. O(log n)			
○ c. O ?			
● d. O(nlogn)			
CLEAR MY CHOICE			
Question 17			
Answer saved			
Marked out of 1.00			
The worst-case time complexity of Quick Sort is			
○ a. O ? >			
b. O(n^2)			
○ c. O(nlogn)			
Od. None of the Above			
CLEAR MY CHOICE			
Question 18			
Answer saved			
Marked out of 1.00			
Quick sort efficiency can be improved by adopting			
○ a. tree search method			
b. non-recursive method			
○ c. insertion method			
O d. All of the above			
CLEAR MY CHOICE			

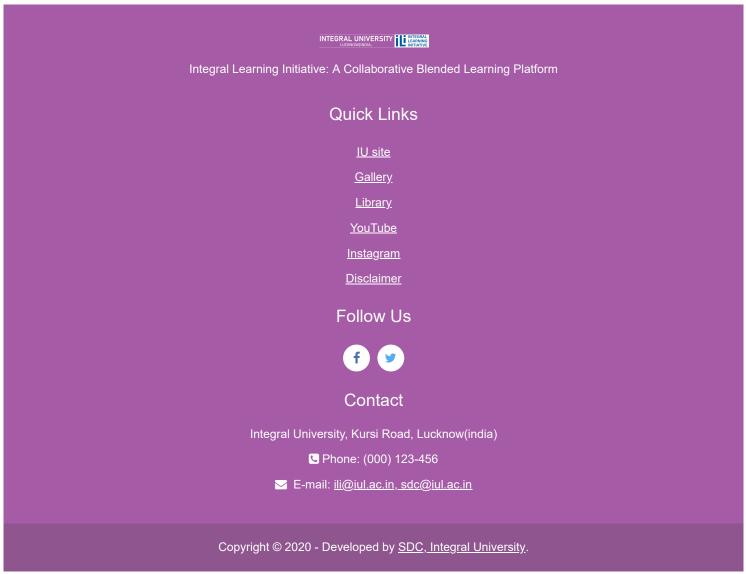
/4/21, 8:06 PM	Unit Exam 1 (page 5 of 7)
Question 19	
Answer saved	
Marked out of	1.00
Selection	sort and quick sort both fall into the same category of sorting algorithms.What is this category?
⊚ a. Ir	nterchange sorts
○ b. □	ivide-and-conquer sorts
○ c. A	verage time is quadratic
○ d. C	o(n log n) sorts
CLE	AR MY CHOICE
00	
Question 20	
Answer saved Marked out of	
warked out or	1.00
Stack is a	lso called as
⊚ a. L	ast in first out
	irst in last out
○ c. L	ast in last out
○ d. F	irst in first out
CLE	AR MY CHOICE
◀ FOC	JSED DISCUSSION FORUM UNIT 1
Jump to.	. •



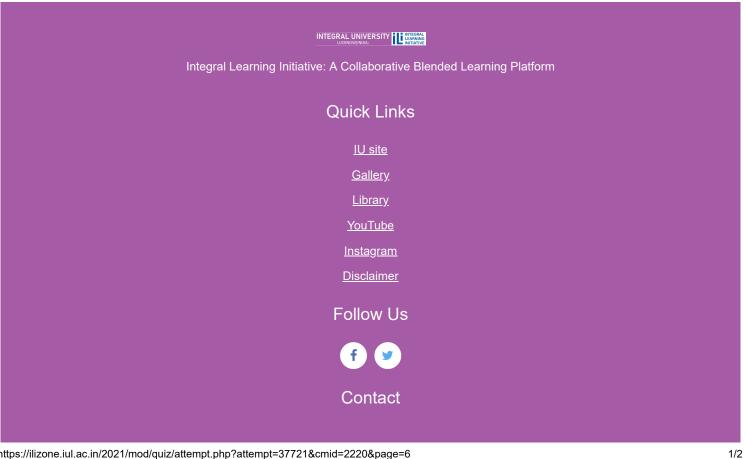
Dashboard / My courses / CA308 A&B&C / Unit I / Unit Exam 1 Question 21 Answer saved Marked out of 1.00 The algorithm like Quick sort does not require extra memory for carrying out the sorting procedure. This technique is called ○ a. stable o b. In place Oc. unstable Od. in-partition **CLEAR MY CHOICE** Question 22 Answer saved Marked out of 1.00 The disadvantage in using a circular linked list is. o a. It is possible to get into infinite loop. ○ b. Last node points to first node. O c. Time consuming O d. Requires more memory space **CLEAR MY CHOICE** Question 23 Answer saved Marked out of 1.00 The recurrence relation capturing the optimal execution time of the Towers of Hanoi problem with n discs is \bigcirc a. $T_{?} = 2T(n-2) + 2$ \bigcirc b. $T_{?} = 2T(n-1) + n$

c. T^{*} = 2T(n - 1) + 1
 d. T^{*} = 2T(n/2) + 1
 CLEAR MY CHOICE

4/21, 0.001 W	One Exam 1 (page 0 of 1)
Question 24 Answer saved Marked out of 1.00	
The running time of insertion sort is a. O(n^2) b. O c. O(log n) d. O(nlog n) CLEAR MY CHOICE	
Question 25 Answer saved Marked out of 1.00	
the time complexity of the Recurrence relation T = 2T(n/2) + C a. O b. O(n^2) c. O(logloglogn) d. None of the above CLEAR MY CHOICE) is
▼ FOCUSED DISCUSSION FORUM UNIT 1 Jump to	‡



Dashboard / My courses / CA308 A&B&C / Unit I / Unit Exam 1 Question **26** Answer saved Marked out of 1.00 The time complexity of quick sort is ○ a. O ○ b. O(n^2) o c. O(nlog n) ○ d. O(log n) **CLEAR MY CHOICE** ◀ FOCUSED DISCUSSION FORUM UNIT 1 Jump to... **\$**



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