CS140 2019 Final Exam Answer Sheet, Page 1

Name: _____

Email: _____@vols.utk.edu

Question 1:

Circle the answer.

A. True False

B. True False

C. *O(1)* *O(log n)* *O(n)* *O(n log n)* *O(n^2)* *O(n^2 log n)*

D. *O(1)* *O(log n)* *O(n)* *O(n log n)* *O(n^2)* *O(n^2 log n)*

E. *O(1)* *O(log n)* *O(n)* *O(n log n)* *O(n^2)* *O(n^2 log n)*

F. *O($15n^2$)* *O(n^2)* *O($15n^2+400n+5\log(n)$)* *O($n^2+n+\log(n)$)*
O(400n) *O(n)* *O(5 log(n))* *O(log(n))*

G. *O(1)* *O(log n)* *O(n)* *O(n log n)* *O(n^2)* *O(n^2 log n)*

H. Preorder Postorder Inorder

I. True False

J. True False

K. *O(1)* *O(log n)* *O(n)* *O(n log n)* *O(n^2)* *O(n^2 log n)*

L. *O(55n)* *O(n)* *O(55n+4n log(n)+20log(n))* *O(55n+n log(n)+log(n))*
O(4n log(n)) *O(n log(n))* *O(20 log(n)* *O(log(n))*

M. *O(1)* *O(log n)* *O(log m)* *O((log n)(log m))* *O(n)* *O(m)*
O(nm) *O(n log n)* *O(n log m)* *O(m log m)* *O(m log n)* *O(m^2)*

N. True False

O. Preorder Postorder Inorder

P. Preorder Postorder Inorder

Q. True False

R. *O(1)* *O(log n)* *O(n)* *O(n log n)* *O(n^2)* *O(n^2 log n)*

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Question 2: Put the answers here:

Implementation 1:	Implementation 2:	Implementation 3:	Implementation 4:	Implementation 5:
Implementation 6:	Implementation 7:	Implementation 8:	Implementation 9:	Implementation 10:

Question 3: Put the answers to parts A through E here:

Part A:	Part B:	Part C:	Part D:	Part E:

Question 3: Do the remainder of question three here and on the other sheets.

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Question 3: Do the rest here, and use the extra space if you need it for other questions.

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Question 4:

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Name: _____

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Question 5:

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Name: _____

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Use this if you need it.