CSC 225 SPRING 2013
ALGORITHMS AND DATA STRUCTURES I
MIDTERM EXAMINATION I
UNIVERSITY OF VICTORIA

1 Midterm-Spring-2008

Answer to Question 2(a): $50, (\log n)^2, 2n, n \log 8 + \log n, 4^{\log n}, n^3, n^5, 2^{n-3}, 16^{n-10}, n! \log n$.

Answer to Question 2(b): $T(n) = 3n - 3$.

2 Midterm-Spring-2012

Answer to Question 1(b): $5, (\log n)^5, 5n, n^5, 5^n$.

Answer to Question 1(c): $f(n) = n \log n$.

Answer to Question 2: $T(n) = 5n + 2n \log n$.

Answer to Question 4(a): See Book, page 342.

Answer to Question 4(b): $O(n + k)$.

3 Midterm-Fall-2012

Answer to Question 1(a): $2^{100}, (\log n)^8, n^{0.01}, 5n, 4^{\log n}, 2^{2^n}$.

Answer to Question 1(b): $f(n) = n^2 \log n$.

Answer to Question 2(a): $2^{\log_3 n} + 3n \left(1 - \left(\frac{2}{3}\right)^{\log_3 n}\right)$.