Question 1: Find the total number of primitive operations and the Big Oh notation of the following methods:

|   | Statements                    | S/E | Freq. | Total |
|---|-------------------------------|-----|-------|-------|
| 1 | for (int i = 0; i < n-5; i++) |     |       |       |
| 2 | for (int j = n; j >= 2; j)    |     |       |       |
| 3 | S.O.P(i);                     |     |       |       |
|   | Total Operations              |     |       |       |
|   | Big Oh                        |     | •     |       |

|   | Statements                   | S/E | Freq. | Total |
|---|------------------------------|-----|-------|-------|
| 1 | for (int i = 0; i < n; i++)  |     |       |       |
| 2 | for (int j = 0; j <= i; j++) |     |       |       |
| 3 | S.O.P(i);                    |     |       |       |
|   | Total Operations             |     |       |       |
|   | Big Oh                       |     |       |       |

Question 2: Find the simplest g(n), c and  $n_0$  for the following f(n) s.t:  $f(n) \le cg(n)$ ,  $\forall n \ge n_0$ .

 $5n^3 \log n + 20n^2 - 4n + 3$ 

Question 3: Find the big Oh notation for the following functions:

 $2^{4logn+2} + n^3 logn$