DIPL Assignment – 3

Q1) Evaluate the statements sum(cube(3), cube(4), cube(5)) and cube(sum(3, 4, 5)) with respect to applicative and normal order of evaluation using the following functions:

int sum(int a, int b, int c){
 return a+b+c;
 }
	int cube(int s){
	     return s*s*s;
	 }

Q2) Show that the following grammar is ambiguous. How C programming language removes this ambiguity? How to remove the ambiguity without using C convention?
Stmt –> if(expr) stmt [else stmt]

Q3) Write a Spaghetti code to print the numbers 1 to 10 along with their squares and also write the equivalent structured programming Code.

Q4) Write a java program to sort the array of strings in ascending order.

Q5) What is referential transparency? Give three examples of functions which are referential transparent and three functions which are not referential transparent.