Quiz 8

Deadline	Sunday, 09 August 2020 at 11:59PM
Latest Submission	*no submission yet*
Maximum Mark	4

Question 1 (1 mark)

If we have an alphabet Σ = { a, b, c }, how many strings are in Σ^2?

(a) ○	3
(b) ○	6
(c) ○	9
(d) ○	3^3 (i.e. 27)
(e) ○	None of the above

Question 2 (1 mark)

Consider the following implementation of naive string matching

```
int naiveStringMatch(char *t, char *p)
{
   int i, j;           // indices into t and p
   int n = strlen(t);  // length of string
   int m = strlen(p);  // length of pattern
   for (i = 0; i <= n-m; i++) {
      for (j = 0; j < m; j++) {
         if (t[i+j] != p[j]) break;
      }
      if (j == m) return i; // index of match
   }
   return -1;  // no match
}
```

How many times would the `(T[i+j] != P[j])` test be done in executing the following call to the above function

```
int where = naiveStringMatch("my string","tri");
```

(a) ○	3
(b) ○	5
(c) ○	6
(d) ○	7
(e) ○	None of the above

Question 3 (1 mark)

Assuming the following functions on `Lists`

- `List new()` returns a new empty `List`
- `bool empty(List L)` checks whether `L` is empty
- `int head(List L)` returns first element in `L`
- `List tail(List L)` returns all but first element in `L`
- `List insert(int x, List L)` returns new list with `x` as head and `L` as tail
- `List append(List L, int x)` returns new list with `x` as last element
- `List concat(List L1, List L2)` returns new list which is concatenation of lists `L1` and `L2`

which of the following functions produces a reversed version of the original List?

(a) ○

```
List reverse(List L) {
   if (empty(L))
      return(new());
   else
      return(append(reverse(tail(L)),head(L));
}
```

(b) ○

```
List reverse(List L) {
   if (empty(L))
      return(new());
   else
      return(insert(head(L),reverse(tail(L)));
}
```

(c) ○

```
List reverse(List L) {
   if (empty(L))
      return(new());
   else
      return(insert(head(L),tail(L));
}
```

(d) ○

```
List reverse(List L) {
   if (empty(L))
      return(new());
   else
      return(append(tail(L),head(L));
}
```

(e) ○ None of the above

Question 4 (1 mark)

What is the meaning of IOCCC?

(a) ○	International Olympic Committee for Casual Clothing
(b) ○	International Obfuscated C Coding Competition
(c) ○	International Organisation for Clean Concise Coding
(d) ○	Internal Optimisation of C Code Closures
(e) ○	None of the above

✔ Submit