Quiz 8

Deadline	Sunday, 09 August 2020 at 11:59PM
Latest Submission	Sunday, 09 August 2020 at 11:57PM
Raw Mark	3.00/4.00 (75.00%)
Late Penalty	N/A
Final Mark	3.00/4.00 (75.00%)

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

✔ Your response was correct.
Mark: 1.00

Possible strings of length 2 from alphabet {a,b,c} ..

aa, ab, ac, ba, bb, bc, ca, cb, cc

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

✖ Your response was incorrect.
The correct response was: (d)
Mark: 0.00

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

✔ Your response was correct.
Mark: 1.00

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

✔ Your response was correct.
Mark: 1.00

It's actually *International Obfuscated C Code Contest*

I should have checked the exact name before putting up the question and marking (b) as the correct answer.

I'll pay either (b) or (e), assuming that people who chose (e) thought (b) was wrong because the name wasn't exactly the same.