# 浙江大学 2020－2021 学年夏学期

## 《C 程序设计专题》课程期末考试答题卷

课程号：___211Z0050___， 开课学院：__计算机学院__

考试试卷：√A 卷、B 卷（请在选定项上打√）

考试形式：√闭、开卷（请在选定项上打√），允许带__／__入场

考试日期：_2021_ 年_07_月_01_日, 考试时间：_120_ 分钟

| 试题号 | 一 | 二 | 三 | 四 | 总分 | |
|---|---|---|---|---|---|---|
| 满分 | 20 | 30 | 30 | 20 | | |
| 得分 | | | | | 统分人 1 | |
| 阅卷人 | | | | | 统分人 2 | |

### *Section 1: Single Choice(2 marks for each item, total 20 marks)*

1__D__   2_D/B_   3__C__   4__C__   5__C__

6__C__   7__D__   8__B__   9__D__   10__D__

### *Section 2: Read the following problems and answer questions (5 marks for each item, total 30 marks)*

1.  (1)   abc*+def^^-

   (2)   typedef struct {int a; int b;} (*T)[20];

2.  ABC#XYZ#

3.  1#2#5#

4.  2021

5.  (1)The array is already sorted.   (2) O(NlogN).   (3) O($N^2$)

6.  Zeinhajg

## Section 3: According to the specification, complete each program (2 marks for each blank, total 30 marks)

| (1) | *head_ref | (2) | NULL |
|---|---|---|---|
| (3) | prev = current | (4) | prev |
| (5) | end > front/front < end | (6) | (a[min_id] < a[i]) ? min_id : i |
| (7) | (a[max_id] > a[i]) ? max_id : i | (8) | min_id == end |
| (9) | InitGraphics() | (10) | TimerEventProcess |
| (11) | startTimer | (12) | timerID |
| (13) | !DisplayCursor | (14) | MovePen(cursorx, cursory) |
| (15) | erasemode | | |

## Section 4: Algorithms design (10 marks for each item, total 20 marks)

1.

```
int LoopDetect (struct Node* list)
{
    struct Node *slow_p = list,
               *fast_p = list;

    while (slow_p && fast_p &&
        fast_p->next) {
        slow_p = slow_p->next;
        fast_p = fast_p->next->next;
        if (slow_p == fast_p) {
            return 1;
        }
    }
    return 0;
}
```

2.

```
int RemoveDuplicates(int array[], int n)
{
    int n, id;

    if (n<2) return n;          //1'
    id = 0;
    for (i = 0; i < n; i++) {   //7'
        if (array[id] != array[i]) {
            array[++id] = array[i];
        }
    }
    return id + 1;              //2'
}
```