```
int x;
x = 1 + 1;
printf("%d",x);
```

1. What is the output of the following code? Hide answers

- ▲ 2 ✔
- ◆ 3.1415926
- ● %d
- ■ Out of memory

```
int arr[] = { 2, 4, 6, 8, 10 };
int i = 0;
while (i < 3) {
   i++;
   printf("%d",arr[i]);
}
```

2. What is the output of this code? Hide answers

- ▲ 24
- ◆ 246
- ● 46
- ■ 468 ✔

```
#include <stdio.h>
char *f(char *p) {
   return p+1;
}
int main(void) {
   char str[] = "abc";
   printf("%c", *f(str));
   return 0;
}
```

3. What is the output of this program? Hide answers

- ▲ a
- ◆ b ✔
- ● c
- ■ bc

```
typedef struct node {
   int v;
   int w;
   struct node *next;
} NodeT;
```

4. On a CSE machine, how many bytes are needed for a dynamic of type NodeT? Hide answers

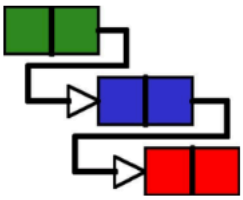
- ▲ 30
- ◆ 60
- ● 80
- ■ 120 ✔

```
typedef struct { int *ptr; } StrT;

StrT *p = malloc(sizeof(StrT));
p->ptr = malloc(sizeof(int));
*(p->ptr) = 9024;
free(p);
```

5. What is the problem with the following piece of code? Hide ans

- ▲ an uninitialised pointer is dereferenced
- ◆ a NULL-pointer is dereference
- ● unallocated heap space is accessed
- ■ memory leak ✔



6. If a queue is implemented with a singly-linked linked list in the then: Hide answers

- ▲ both enqueue() and dequeue() are O(1) ✔
- ◆ dequeue() must be O(n)
- ● enqueue() must be O(n)
- ■ one of the two is O(1) and the other O(n)

```
f(A):
| Input  array A[0..n-1] of n integers
| Output some value
|
| s=0
| for all i=0..⌊n/2⌋ do
| |  for all j=⌊n/2⌋+1..n-1 do
| |     s=s+A[i]*A[j]
| |  end for
| end for
| return s
```

7. What is the asymptotic time complexity of this algorithm? Hid

- ▲ O(n)
- ◆ O(n log n)
- ● $O(n^{1.5})$
- ■ $O(n^2)$ ✔