

Computer Programming**Final Exam - Part I - Short review questions**

1. How many times will the following message be printed?

```
for (x = 10, y = 0; x < 100; x += 10, y ++)  
    printf("test \n");
```

2. Given the following definition of the function rec, what is the output of a call rec(4) ?

```
void rec(int p) {  
    if (p<7) rec(p+1);  
    printf("%i ",p);  
}
```

3. What changes in the output of the call rec(4) if we change the definition of the function in following way:

```
void rec(int p) {  
    if (p<7) rec(++p);  
    printf("%i ",p);  
}
```

4. What is the output of following program ?

```
void fct(int *m, int n) {  
    int c=*m;  
    *m=n;  
    n=c;  
}  
int main(void) {  
    int x=1,y=2;  
    fct(&x,y);  
    printf("%i %i",x,y);  
    return 0;  
}
```

5. What is the output of following program sequence?

```
int a[3]={4,5,6};  
int b=7;  
int *p1, *p2;  
p1=&a[0];  
p2=&a[1];  
printf("%i %i %i \n",*p1, *p2, p2-p1);  
p2--;  
*p2=b;  
printf("%i %i \n",*p1, *p2);  
printf("%i %i %i \n", a[0], a[1], a[2]);
```

6. What is the output of following program sequence?

```
char *s1="Ana";
char *s2;
char s3[10]="Ion";
s2=s1;
s1=s3;
s3[1]='a';
printf("%s %s %s",s1,s2,s3);
```

7. The following sequence of declarations and initializations is given:

```
char *pc;
char *str="ciao!"
pc=&str[1];
```

What does the expression *--pc mean, and how is it different from --*pc ?

8. Find and correct the errors (rewrite the code in a correct form):

```
char *s1;
char *s2;
scanf("%s",s1);
strcpy(s2, s1);
printf("%s %s",*s1, *s2);
```

9. Find and correct the errors (rewrite the code in a correct form):

```
int *t;
for (i=1; i<10; i++)
    scanf("%i",t+i);
for (i=1; i<10;i++)
    printf("%i",t+i);
```