

COP 3223 Sec 1: Spr'09 C Programming Test 1 Practice (50 points)

1. (10 points)

Write down the printed output of this program. Mark your blank chars too.

WRITE YOUR OUTPUT BELOW HERE

```
#include <stdio.h>
int main(void)
{
    float f;
    int a,i;
    a = 0;
    a = a + 1;
    printf ("A= %d\n", a);
    a += 2;
    a--;
    a++;
    printf ("B= %d\n", a);
    i=2;
    f=5.0;
    printf ("F= %f\n", f/i);
    a=5;
    printf ("C= %d\n", a/i);

    return 0;
}
```

2. (10 points)

Write down the printed output of this program. Mark your blank chars too.

WRITE YOUR OUTPUT BELOW HERE

```
#include <stdio.h>
int main(void)
{
    float f;
    int a,i;
    a = 0;
    a = a + 1;
    printf ("A= %4d\n", a);
    a += 2;
    a = a % 2
    a++;
    printf ("B= %5d\n", a);
    i=2;
    f=5.0;
    printf ("F= %6.2f\n", f/i);

    return 0;
}
```

3. (15 points) Trace the following program:

ENTER YOUR TRACE BELOW

| Prog | | | | print or other action |
|---------------------------------------|---|---|---|--------------------------|
| Line # | a | b | c | |
| 1. #include <stdio.h> | | | | |
| 2. | | | | |
| 3. | | | | |
| 4. int main(void) | | | | |
| 5. { | | | | |
| 6. int a=1 , b=4, c=3; | | | | |
| 7. a += 2; | | | | |
| 8. if (a <= b) | | | | |
| 9. { | | | | |
| 10. if (b <= c) | | | | |
| 11. printf ("c= %d\n", c); | | | | |
| 12. else | | | | |
| 13. printf ("c= %d\n",a+c); | | | | |
| 14. } | | | | |
| 15. else | | | | |
| 16. printf ("b= %d\n", b); | | | | |
| 17. b -= 1; | | | | |
| 18. if (a <= b) | | | | |
| 19. printf ("a= %d\n", a); | | | | |
| 20. else | | | | |
| 21. printf ("b= %d\n", b); | | | | |
| 22. | | | | |
| 23. | | | | |
| 24. return 0; | | | | |
| 25. } | | | | |

4. (25 points) Trace the following program:

ASSUME keyboard input IS: 2

ENTER YOUR TRACE BELOW

| | Prog | a | i | n | print or other action |
|--------------------------------------|------|---|---|---|--------------------------|
| 1. #include <stdio.h> | | | | | |
| 2. | | | | | |
| 3. | | | | | |
| 4. int main(void) | | | | | |
| 5. { | | | | | |
| 6. int a, i, n; | | | | | |
| 7. a = 1; i = 1; | | | | | |
| 8. scanf("%d",&n); | | | | | |
| 9. while (i <= n) | | | | | |
| 10. { | | | | | |
| 11. a = a * a + i * i ; | | | | | |
| 12. i++; | | | | | |
| 13. if (i <=n) | | | | | |
| 14. printf ("b= %d\n", a); | | | | | |
| 15. } | | | | | |
| 16. for (i=5; i>3; i--) | | | | | |
| 17. { | | | | | |
| 18. printf ("c= %d\n",a+i); | | | | | |
| 19. } | | | | | |
| 20. return 0; | | | | | |
| 21. } | | | | | |