

COP 3223 Sec 2: Fall'11 C Progr Practice Test 1 (50 points)

- 1. (8 points)

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

WRITE YOUR OUTPUT BELOW HERE
ONLY THIS WILL BE GRADED

```
#include <stdio.h>
                                     |
int main(void)                       |
{   float f;                         |
    int a,i;                          |
    a = 4;                             |
    a = a - 1;                         |
    printf ("P= %d\n", a);             |
    a += 2;                             |
    a++;                                 |
    a = a % 2;                         |
    printf ("Q= %4d\n", a);           |
    i=2;                                |
    f=13.0;                            |
    printf ("R= %6.2f\n", f/i);      |
    a=13;                               |
    printf ("S= %d\n", a/i);         |
    return 0;                         |
}
```

- 2. (12 points) Trace the following program:

ENTER YOUR TRACE BELOW

| Prog Line # | a | b | c | print or other action |
|--|---|---|---|--------------------------|
| 1. #include <stdio.h> | | | | |
| 2. | | | | |
| 3. int main(void) | | | | |
| 4. { | | | | |
| 5. int a=5 , b=3, c=4; | | | | |
| 6. a += 1; | | | | |
| 7. | | | | |
| 8. if (b > c) | | | | |
| 9. printf ("a= %d\n", a+4); | | | | |
| 10. else | | | | |
| 11. printf ("b= %d\n", b); | | | | |
| 12. | | | | |
| 13. b -= 2; | | | | |
| 14. if (a <= b) | | | | |
| 15. { | | | | |
| 16. printf ("c= %d\n", a+c); | | | | |
| 17. } | | | | |
| 18. else | | | | |
| 19. { | | | | |
| 20. if (b > c) | | | | |
| 21. printf ("d= %d\n", a+c); | | | | |
| 22. else | | | | |
| 23. printf ("f= %d\n", c); | | | | |
| 24. } | | | | |
| 25. | | | | |
| 26. return 0; | | | | |
| 27. } | | | | |

WRITE YOUR FINAL OUTPUT HERE

| | | | | |
|-----------|--|--|--|--|
| Outline 1 | | | | |
| Outline 2 | | | | |
| Outline 3 | | | | |
| Outline 4 | | | | |

- 3. (20 points) Trace the following program:

ASSUME keyboard input IS: 4

ENTER YOUR TRACE BELOW

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

WRITE YOUR FINAL OUTPUT HERE

| | | | | |
|-----------|--|--|--|--|
| Outline 1 | | | | |
| Outline 2 | | | | |
| Outline 3 | | | | |
| Outline 4 | | | | |
| Outline 5 | | | | |
| Outline 6 | | | | |

- 4. (10 points) Write a complete C program that uses a FOR-loop to read in 50 integers. For each of the 50 integers, if it is greater than 100, it should be added into a sum that was initialized to zero. After the loop, multiply the sum by 85 and then print out the answer. Assume correct input.
- 5. (10 points) Write a complete C program that uses a FOR-loop to read in 41 integers. For each of the 41 integers, first multiply the integer by itself; if the result obtained (i.e., the squared value) is greater than 500, the original integer (before it was squared) should be added into a sum that was initialized to zero. After the loop, multiply the sum by itself and then print out the answer as an integer. Assume correct input.