ENEE 140, Spring 2015

Final Exam — Answer Key

Do Not Make a Copy!!

1 (16):	
2 (10):	
3 (12):	
4 (8):	
5 (15):	
6 (5):	
7 (16):	
8 (18):	
TOTAL (100):	

Problem 1. (16 points)

Assignment		Value
float	r1 = c / d;	0.5
float	r2 = a / (**int**)d;	0.0
int	r3 = a % b;	1
unsigned	r4 = UINT_MAX % 2;	1
int	r5 = a && b;	1
int	r6 = e++;	4
int	r7 = (a - (**unsigned**)b) > 0;	1
float	r8 = (a / b > 0) ? c : d;	2.0
int	r9 = b >> 1;	1

Problem 2. (10 points)

Answer:

```
a=0 is not true.
a==0 is true.
```

Problem 3. (12 points)

```
i =       6              k =   11
```

Problem 4. (8 points)

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Problem 5. (15 points)

```c
#include <stdio.h>


int
main (int argc,    char *argv[])
{

switch(argc)
   {
   case 1:
      printf("You did not provide any input.\n");
      break;
   case 2:
      printf("You are signed up for %s.\n",argv[1]);
      break;
   case 3:
      printf("You   are   signed   up   for   %s   in   the   %s
semester.\n",argv[1],argv[2]);
      break;
   default :
      printf("Too many arguments!\n");
   }

return 0;
}
```

Problem 6. (5 points)

Answer: 4

Problem 7. (16 points)

```c
char first[8];
printf("What is your first name?\n");
scanf("%s",first);
int i;
for(i=0;i<8;i++) {
  if(first[i]>='a' && first[i] <='z') {
    first[i] = first[i] - 32;
  }
}
printf("%s",first);
```

Problem 8. (18 points)

A.

```
r = (2*(rand() % 10))+21;
```

B.

The program generates a random permutation of the 10 odd numbers between 20–40 (i.e. 21, 23, 25, …39). The variable f is a flag variable which indicates whether or not a number was previously generated.