

EE 2905

Dr. Johnson

Homework 5

1 – Identify the error in each function declaration.

10pts

void ave(char s, char t);

void wed(sat int, sun int);

foo2(char tire, float steer);

int fun1(int s, t);

int foo(float black, char white)

2 – Identify the error in each function call.

10pts

`fun2((char) a, b);`

`ave(float red, blue);`

`fri(mon , tue)`

`int foo(a, b);`

`tire(tires steer);`

3 – Identify the error in each function definition.

10pts

```
int foo(float x, int y){  
    x = x + y;  
    return x;  
}
```

```
void foo(int x){  
    int y;  
    ...  
    return y;  
}
```

```
int foo(int x, int y){  
    z = x + y;  
    return z;  
}
```

4 – Given the following program. What will be printed out for the answer if the user enters 41 as the input? 10pts

```
/*
 * hw6_1.c
 */
#include <stdio.h>

int fun1(int a);
int fun2(int a);
int fun3(int a);

int main(void){
    int a;
    int b;

    printf("Enter an integer: ");
    scanf("%d", &a);

    b = fun1(a);
    printf("answer is: %d",b);

    return 0;
}

int fun1(int b){
    int c;
    c = fun2(b) + fun3(b);
    return c;
}
```

```
int fun2(int d){
    return(d % 10);
}

int fun3(int e){
    int f;
    f = e/10;
    f = f % 10;
    return f;
}
```



5 – Given the following memory map – evaluate each item

20pts

int foo;
int boo;
int zoo;
int* a_ptr;
int* b_ptr;

variable name	value	address
foo	0x1234	0x1000
boo	0x8000	0x2000
zoo	0x2324	0x3000
a_ptr	0x2000	0x7000
b_ptr	0x3456	0x8000

&boo

*b_ptr

a_ptr

&b_ptr

boo + b_ptr + *a_ptr + &boo

HEX

6 – Fill in the memory map at the end of the following code

20pts

*** note: this code will not compile – for illustrative purposes only ***

```
int foo, boo;
float zoo, soo;
int* a_ptr, b_ptr;
float*c_ptr, d_ptr;

a_ptr = &boo;
c_ptr = a_ptr + 0x2000;
*c_ptr = 3.5 * foo;
*a_ptr = 7;
zoo = soo + boo;
d_ptr = a_ptr + c_ptr;
*d_ptr = 0x1000;
*b_ptr = boo + *a_ptr;
```

variable name	value	address
foo	5	0x1000
boo		0x2000
zoo		0x3000
soo		0x4000
a_ptr		0x5000
b_ptr		0x6000
c_ptr		0x7000
d_ptr		0x8000

7 – Provide the final values after executing the following code snippet 20pts

```
#include <stdio.h>

int fun1(int* a, int* b);
float fun2(float a, float* b);

int main(void){

    int a = 3;
    int b = 2;
    float c = 3.5;
    float d = 4.5;
    float e = 12;

    a = fun1(&a,&b);
    e = fun2(c,&d);

return 0;
}

int fun1(int* foo, int* boo ){
    int zoo;
    if (*boo > 0){
        zoo = 2**foo;
    }
    else{
        zoo = 3**foo;
    }
    *boo = zoo + *foo;
    *foo = 12;
    return zoo;
}
```

