

Question 1

1.1

int x = 7, y = 3, z = 2;

z: **24**

1.2

1 7 1 4

0 1

1.3

x:**3** y:**8** z:**12** w:**0**

1.4

x: **15** y: **15** z:**14** w:**28**

1.5 **2.400** **2.700**

1.6 **yes**

4 **2**

1.7

11111111 **0377 or 0xFF or 255**

01111111 **0177 or 0XF7 or 127**

1.8

59	12
<hr/> invalid <hr/>	<hr/> invalid <hr/>
invalid	23

1.9

1) turn on bit-3, keep other bits

2) turn off bit-5, keep other bits
3) 0 0 0 1 0 1 0 1 1 1
4) 1 1 0 0 0 0 0 0 0 0

Parentheses in 1) can be removed. Because << has higher precedence than |,
Parentheses in 4) can be removed. Because ~ has higher precedence than &,

int mask = 59 int mask = 0X3B int mask = 073

Other sol: int mask = 1<<5 | 1<<4 | 1<<3 | 1<<1 | 1 = 48 | 11 = 32|16|8|3 anything evaluate to 59

turn on bit-0, 1, 3, 4, 5, keep others or 1 1 0 1 1 1 1 1 1 1

1.10

- illegal
- 1 5 3 2 25
- 1 0 0 0 0 1 \0 \0 \0 \0 is wrong
- 1 5 3 0 0 1 5 3 \0 \0 is wrong

1.11

Hello world-12-11

Hi-12-2

1.12

Hello world-20-11

Hello worldHi-20-13

1.13 F 70

G 71

H 72

I 73

1.14

4.200

1.15 8.000

1.16

No. Index is (a local variable), not initialized to 0

1.17

Clause one

Entered 1

Clause one

Entered 1

Clause one

Entered 1

1.18

x:100 y: 200 z: 0

x:100 y: 210 z: 10

x:100 y: 220 z: 20

1.19

- a. y is static in function.c, which makes its scope to be within function.c only, and thus not accessible in main.c – “undefined reference to y”

1.20

Scanf needs to change the value of its parameter.

Since c is call/pass by value, to change/set the value of age and wage, we need the address/pointer of the variables, and thus &age, &wage.

In C, array name contains the address of the first elements arr=&arr[0] (array name is already a pointer). So we just pass it to the function without &

Question 2

2.1

100 – 8031 – 8031 – 8031

2.2 See solution of lab5

2.3

y's value is set to 69 now

x's value is set to 70 now

x's value is set to 700 now

y's value is set to 70 now

x's value is set to 680 now

x: 680 y: 70

2.4 Consider the following ANSI C program.

<u>1001</u>	<u>3004</u>	<u>5008</u>
<u>1001</u>	<u>3004</u>	<u>5008</u>
<u>1006</u>	<u>3024</u>	<u>5048</u>

2.5

valid	invalid

2.6

1000 1000

1000 1000

1004 1004

1008 1008

2.7

2012 10

2016 126

2016 126

2020 22

4 1 1

17, 4, 58, 10, 126, 22, 33, 456

2.81) **False**

2) f. All of the above

2.9

argv is an array. Each element of the array is a pointer to char. That is, argv is an array of (char) pointers

