

## C Union(Questions)

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### 1) Size of a union is determined by size of the

- a) First member in the union
- b) Last member in the union
- c) Biggest member in the union
- d) Sum of the sizes of all members

### 2) Comment on the following union declaration?

1. `#include <stdio.h>`
2. `union temp`
3. `{`
4. `int a;`
5. `float b;`
6. `char c;`
7. `};`

`union temp s = {1,2.5,'A'}; //REF LINE`

Which member of the union will be active after REF LINE?

- a) a
- b) b
- c) c
- d) Such declarations are illegal

### 3) What would be the size of the following union declaration?

1. `#include <stdio.h>`
2. `union uTemp`
3. `{`
4. `double a;`
5. `int b[10];`
6. `char c;`
7. `}u;`

(Assuming size of double = 8, size of int = 4, size of char = 1)

- a) 4

- b) 8
- c) 40
- d) 80

**4) What type of data is held by variable u in this C code?**

1. `#include <stdio.h>`
2. `union u_tag`
3. `{`
4. `int ival;`
5. `float fval;`
6. `char *sval;`
7. `} u;`

**5) The variable u here**

- a) Will be large enough to hold the largest of the three types;
- b) Will be large enough to hold the smallest of the three types;
- c) Will be large enough to hold all of the three types;
- d) None of the mentioned

**6) Members of a union are accessed as\_\_\_\_\_.**

- a) `union-name.member`
- b) `union-pointer->member`
- c) Both a & b
- d) None of the mentioned

**7) What is the output of this C code?**

1. `#include <stdio.h>`
2. `struct`
3. `{`
4. `char *name;`
5. `union`
6. `{`

7.        char \*sval;
8.        } u;
9.        } symtab[10];

The first character of the string sval by either of

- a) \*symtab[i].u.sval
- b) symtab[i].u.sval[0]
- c) You cannot have union inside structure
- d) Both a & b

**8) What is the output of this C code(size of int and float is 4)?**

1.    #include <stdio.h>
2.    union
3.    {
4.        int ival;
5.        float fval;
6.    } u;
7.    int main()
8.    {
9.        printf("%d", sizeof(u));
10.    return 0;
11.   }

- a) 16
- b) 8
- c) 4
- d) 32

**9) What is the output of this C code?**

1.    #include <stdio.h>
2.    union stu
3.    {

```

4.     int ival;

5.     float fval;

6. };

7. int main()

8. {

9.     union stu r;

10.    r.ival = 5;

11.    printf("%d", r.ival);

12.    return 0;

13. }

```

- a) 9
- b) Compile time error
- c) 16
- d) 5

### 10) What is the output of this C code?

```

1.  #include <stdio.h>

2.  union

3.  {

4.      int x;

5.      char y;

6.  }p;

7.  int main()

8.  {

9.      p.x = 10;

10.     printf("%d\n", sizeof(p));

11.     return 0;

```

12. }

- a) Compile time error
- b) sizeof(int) + sizeof(char)
- c) Depends on the compiler
- d) sizeof(int)

**11) What is the output of this C code?**

```
1.  #include <stdio.h>

2.  union

3.  {

4.      int x;

5.      char y;

6.  }p;

7.  int main()

8.  {

9.      p.y = 60;

10.     printf("%d\n", sizeof(p));

11. }
```

- a) Compile time error
- b) sizeof(int) + sizeof(char)
- c) Depends on the compiler
- d) sizeof(char)

**12) What is the output of this C code?**

```
1.  #include <stdio.h>

2.  union p

3.  {

4.      int x;

5.      char y;
```

```

6.   };

7.   int main()

8.   {

9.       union p p, b;

10.      p.y = 60;

11.      b.x = 12;

12.      printf("%d\n", p.y);

13.      return 0;

14.  }

```

- a) Compile time error
- b) Depends on the compiler
- c) 60
- d) Undefined behaviour

### 13) What is the output of this C code?

```

1.   #include <stdio.h>

2.   union p

3.   {

4.       int x;

5.       char y;

6.   }k = {1, 97};

7.   int main()

8.   {

9.       printf("%d\n", k.y);

10.      return 0;

11.  }

```

- a) Compile time error

- b) 97
- c) a
- d) 1

**14) What is the output of this C code?**

```
1.  #include <stdio.h>

2.  union p

3.  {

4.      int x;

5.      char y;

6.  }k = {.y = 97};

7.  int main()

8.  {

9.      printf("%d\n", k.y);

10.     return 0;

11. }
```

- a) Compile time error
- b) 97
- c) a
- d) Depends on the standard

**15) What is the output of this C code?**

```
1.  #include <stdio.h>

2.  union p

3.  {

4.      int x;

5.      float y;

6.  };

7.  int main()
```



```

8.  {
9.      union p p, b;
10.   p.x = 10;
11.   printf("%f\n", p.y);
12.   return 0;
13. }

```

- a) Compile time error
- b) Implementation dependent
- c) 10.000000
- d) 0.000000

**16) Which of the following share a similarity in syntax?**

- 1. Union, 2. Structure, 3. Arrays and 4. Pointers
- a) 3 and 4
- b) 1 and 2
- c) 1 and 3
- d) 1, 3 and 4

**17) What is the output of this C code?**

```

1.  #include <stdio.h>
2.
3.  union utemp
4.  {
5.      int a;
6.      double b;
7.      char c;
8.  }u;
9.  int main()
10. {
11.     u.c = 'A';
12.     u.a = 1;

```

12.     printf("%d", sizeof(u));
13.     }

The output will be: (Assuming size of char = 1, int = 4, double = 8)

- a) 1
- b) 4
- c) 8
- d) 13

### 18) What is the output of this C code?

1.     #include <stdio.h>
2.     union utemp
3.     {
4.         int a;
5.         int b;
6.     }u;
7.     int main()
8.     {
9.         u.a = 97;
10.        u.b = 88;
11.        printf("u.a=%d",u.b,"%d\n",u.a,u.b);
12.        return 0;
13.     }

The output will be: (Assuming size of char = 1, int = 4, double = 8)

- a) 97 88
- b) 97 97
- c) 97 garbage value
- d) compilation error

### 19) What is the output of this C code?

1.     #include <stdio.h>

```
2. union utemp
3. {
4.     int a;
5.     char b;
6. }u;
7. int main()
8. {
9.     u.a = 97;
10.    u.b = 'B';
11.    printf("%d", sizeof(u));
12.    return 0;
13. }
```

- a) 1
- b) 4
- c) 5
- d) None of the following

## References:

1)<http://www.sanfoundry.com/c-interview-questions-answers/>