Quiz 7 - Structures Union

Total points   70/125   ?

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Section score   70/125

✕ *

0/5

How many bytes in memory taken by the following C structure?

How many bytes in memory taken by the following C structure?

```c
#include <stdio.h>
struct test
{
    int k;
    char c;
};
```

a) Multiple of integer size
b) integer size+character size
c) Depends on the platform
d) Multiple of word size

○ A

◉ B ✕

○ C

○ D

Correct answer

◉ A

✓ * 5/5

Assume **sizeof** an integer and a pointer is 4 byte. Output?

```c
#include <stdio.h>

#define R 10
#define C 20

int main()
{
    int (*p)[R][C];
    printf("%d", sizeof(*p));
    getchar();
    return 0;
}
```

A) 200
B) 4
C) 800
D) 80

○ A

○ B

◉ C   ✓

○ D

✗ *   0/5

'ptrdata' is a pointer to a data type. The expression *ptrdata++ is evaluated as (in C++) :

A) *(ptrdata++)
B) (*ptrdata)++
C) *(ptrdata)++
D) None of the above

○ A

◉ B   ✕

○ C

○ D

Correct answer

◉ A

✓ *   5/5

What would be the size of the following union declaration? (Assuming size of double = 8, size of int = 4, size of char = 1)

```
#include <stdio.h>
    union uTemp
{
    double a;
    int b[10];
    char c;
}u;

a) 4
b) 8
c) 40
d) 80
```

○ A

○ B

◉ C   ✓

○ D

✕ *   0/5

What will be the output of the following C code?

```c
#include <stdio.h>
union p
{
    int x;
    char y;
};
int main()
{
    union p p, b;
    p.y = 60;
    b.x = 12;
    printf("%d\n", p.y);
}
```

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

◉ A   ✕

◯ B

◯ C

◯ D

Correct answer

◉ C

✓ *   5/5

The size of a **union** is determined by the 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

○ A

○ B

◉ C   ✓

○ D

✓ *   5/5

What type of data is holded by variable u **int** in the following C code?

```
#include <stdio.h>
union u_tag
{
    int ival;
    float fval;
    char *sval;
} u;
```

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 the all of the three types;
d) None of the mentioned

◉ A   ✓

○ B

○ C

○ D

✗ *   0/5

What will be the output of the following C code?

```c
#include <stdio.h>
struct point
{
    int x;
    int y;
};
void foo(struct point*);
int main()
{
    struct point p1[]  =  {1, 2, 3, 4};
    foo(p1);
}
void foo(struct point p[])
{
    printf("%d\n", p[1].x);
}
```

a) Compile time error
b) 3
c) 2
d) 1

A   ✕

B

C

D

Correct answer

B

✓ *   5/5

Members of a **union** are accessed as_____

a) **union**-name.member
b) **union**-pointer->member
c) both **union**-name.member & **union**-pointer->member
d) none of the mentioned

○ A

○ B

◉ C   ✓

○ D

✕ *　　　0/5

What will be the output of the C program?

```c
#include<stdio.h>
int main()
{
    struct str;
    {
        int s1;
        char st[30];
    };

    struct str s[] = { {1, "struct1"}, {2, "struct2"}, {3, "struct3"} };
    printf("%d  %s", s[2].s1, (*(s+2)).st);
}
```

A. Compilation Error
B. 1 struct1
C. 2 struct2
D. 3 struct3

○ A

○ B

○ C

◉ D   ✕

Correct answer

◉ A

✕ *   0/5

```c
include <stdio.h>
int f(int x, int *py, int **ppz)
{
    int y, z;
    **ppz += 1;
    z   = **ppz;
    *py += 2;
    y = *py;
    x += 3;
    return x + y + z;
}

void main()
{
    int c, *b, **a;
    c = 4;
    b = &c;
    a = &b;
    printf( "%d", f(c,b,a));
    getchar();
}
```
Run on IDE

A) 18
B) 19
C) 21
D) 22

○ A

○ B

○ C

◉ D   ✕

Correct answer

◉ B

✓ *

Assume that the size of **int** is **4**.
```c
#include <stdio.h>
void f(char**);
int main()
{
    char *argv[] = { "ab", "cd", "ef", "gh", "ij", "kl" };
    f(argv);
    return 0;
}
void f(char **p)
{
    char *t;
    t = (p += sizeof(int))[-1];
    printf("%sn", t);
}
```
Run on IDE

A) ab
B) cd
C) ef
D) gh

○ A

○ B

○ C

◉ D   ✓

✗ *   0/5

Which member of the **union** will be active after REF LINE in the following C code?

```c
#include <stdio.h>
union temp
}{
    int a;
    float b;
    char c;
};
union temp s = {1,2.5,'A'}; //REF LINE

a) a
b) b
c) c
d) Such declaration are illegal
```

○ A

○ B

○ C

◉ D   ✕

Correct answer

◉ A

✕ *

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which of the following structure declaration will **throw** an error?

a)
```
struct temp{}s;
main(){}
```

b)
```
struct temp{};
struct temp s;
main(){}
```

c)
```
struct temp s;
struct temp{};
main(){}
```

d) None of the mentioned

○ A

○ B

◉ C   ✕

○ D

Correct answer

◉ D

✕ *   0/5

```c
#include <stdio.h>

char *c[] = {"GeksQuiz", "MCQ", "TEST", "QUIZ"};
char **cp[] = {c+3, c+2, c+1, c};
char ***cpp = cp;

int main()
{
    printf("%s ", **++cpp);
    printf("%s ", *--*++cpp+3);
    printf("%s ", *cpp[-2]+3);
    printf("%s ", cpp[-1][-1]+1);
    return 0;
}
```

A) TEST sQuiz Z CQ
B) MCQ Quiz Z CQ
C) TEST Quiz Z CQ
D) GarbageValue sQuiz Z CQ

○ A

◉ B   ✕

○ C

○ D

Correct answer

◉ A

✓ *   5/5

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

```c
#include <stdio.h>
struct student
{
    char *name;
};
void main()
{
    struct student s, m;
    s.name = "st";
    m = s;
    printf("%s%s", s.name, m.name);
}
```

a) Compile time error
b) Nothing
c) Junk values
d) st st

○ A

○ B

○ C

◉ D ✓

! ✓ *   5/5

Which **operator** connects the structure name to its member name?

a) –
b) <-
c) .
d) Both <- and .

○ A

○ B

◉ C   ✓

○ D

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What will be the output of the following C code?

```c
#include <stdio.h>
struct
{
    int k;
    char c;
};
int main()
{
    struct p;
    p.k = 10;
    printf("%d\n", p.k);
}
```

a) Compile time error
b) 10
c) Undefined behaviour
d) Segmentation fault

○ A

◉ B   ✕

○ C

○ D

Correct answer

◉ A

✕ *   0/5

What will be the output of the following C code?

```c
#include <stdio.h>
struct temp
{
    int a;
} s;
void func(struct temp s)
{
    s.a = 10;
    printf("%d\t", s.a);
}
main()
{
    func(s);
    printf("%d\t", s.a);
}
```

a) 10 (Garbage Value)
   b) 0 10
   c) 10 0
   d) (Garbage Value) 10

○ A   ✕

○ B

○ C

○ D

Correct answer

◉ C

✓ *   5/5

What will be the output of the following C code?

```c
#include <stdio.h>
void main()
{
    struct student
    {
        int no;
        char name[20];
    };
    struct student s;
    s.no = 8;
    printf("%d", s.no);
}
```

a) Nothing
b) Compile time error
c) Junk
d) 8

○ A

○ B

○ C

◉ D   ✓

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✓ *   5/5

What will be the output of the following C code (Assuming size of `int` and `float` is 4)?

```c
#include <stdio.h>
union
{
    int ival;
    float fval;
} u;
void main()
{
    printf("%d", sizeof(u));
}
```

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

○ A

○ B

◉ C   ✓

○ D

Accept the pledge and sign your name."I affirm that I will not give or receive any unauthorized help on this exam, and that all work will be my own." Signature [Write your name Below] *

M Maheeth Reddy

✓ *   5/5

What will be the output of the following C code?

```c
#include <stdio.h>
union stu
{
    int ival;
    float fval;
};
void main()
{
    union stu r;
    r.ival = 5;
    printf("%d", r.ival);
}
```

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

○ A

○ B

○ C

◉ D   ✓

✓ *   5/5

What will be the output of the C program?

```c
#include<stdio.h>
int main()
{
    struct zoho
    {
        int employees;
        char comp[5];

        struct founder
        {
            char ceo[10];
        }p;
    };
    struct zoho zs = {4000, "zoho", "sridhar"};
    printf("%d %s %s", zs.comp, zs.employees, zs.p.ceo);
    return 0;
}
```

A. zoho garbage value garbage value
B. zoho garbage value sridhar
C. zoho 4000 sridhar
D. zoho 4000 zoho

○ A

◉ B   ✓

○ C

○ D

✓ *   5/5

What will be the output of the following C code?

```c
#include <stdio.h>
struct student
{
    char *name;
};
struct student s;
struct student fun(void)
{
    s.name = "newton";
    printf("%s\n", s.name);
    s.name = "alan";
    return s;
}
void main()
{
    struct student m = fun();
    printf("%s\n", m.name);
    m.name = "turing";
    printf("%s\n", s.name);
}
```

a) newton alan alan
b) alan newton alan
c) alan alan newton
d) compile time error

( ) A   ✓

( ) B

( ) C

( ) D

✓ *   5/5

What will be the output of the following C code?

```c
#include <stdio.h>
struct student
{
    int no;
    char name[20];
}
void main()
{
    struct student s;
    s.no = 8;
    printf("hello");
}
```

a) Compile time error
b) Nothing
c) hello
d) Varies

A ✓

B

C

D

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