EmbeddedC_Questiones_May_2022

❓ إجمالي النقاط 36/45

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0 من إجمالي 0 نقطة

* Name

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36 من إجمالي 45 نقطة　　　　　　　　　　　　　Quiz Questions

1/1   * ? Q36) What is the output of this C code ✓

```c
#include <stdio.h>
int main()
{
int a = 1, b = 1;
switch(a)
{
case a*b:
printf("yes");
case a-b:
printf("no\n");
break;
}
}
```

yes ◯

no ◯

✓   compiler error ◉

yes no ◯

0/1   *** Q25) In TWI which address has higher priority** ✕

Address contain more zeros in LSB ◯

Address contain more ones in LSB ◯

Address contain more zeros in MSB ◯

✕   Address contain more ones in MSB ⦿

الإجابة الصحيحة

Address contain more zeros in MSB ⦿

1/1   *** ? Q33) What is the output of this C code** ✓

```c
extern int x;

int main()
{
    x = 7;
    printf("%d\n", x);
    return 0;
}
```

Compiler error ◯

✓   Linker error ⦿

Runtime error ◯

7 ◯

1/1   * ? Q42) What will be the output of the following C code ✓

```
int main()
{
    int arr[] = {10, 2, 5, 0, 6, 4, 7, 9, 8, 3, 11, 15, 12};
    int (*p)[3] = &arr[4];
    printf("%d, %d, %d\n", **(p+1), *(*(p+2)+2), (*(p-1))[11]);
    return 0;
}
```

✓   9, 12, 12 ◉

                                                      Compilation Error ○

                                                         Garbage Value ○

                                                          Runtime Error ○

1/1   * ? Q34) What is the output of this C code ✓

```c
#include <stdio.h>
int x = 5;
void main()
{
    int x = 3;
    m();
    printf("%d",x);
}
void m()
{
    x = 8;
    n();
}
void n()
{
    printf("%d",x);
}
```

✓   83 ⦿

38 ○

85 ○

53 ○

1/1*　　　　Q27) In SPI communication protocol (daisy chain connections), the ✓
number of slaves micro controllers

29 ○

Depending on GPIO pins number ○

32 ○

✓　　　　Doesn't depend on GPIO pins number ◉

0/1　　　　* ” Q23) Which communication protocol bus called "and gated bus ✕

I2C ○

SPI ○

UART ○

✕　　　　Parallels Communications ◉

الإجابة الصحيحة

I2C ◉

1/1　　　　* Q7) Global variable and local variable with the same name ✓

Compiler Error ○

Linker Error ○

Runtime Error ○

✓　　　　No Error ◉

1/1   *   Q10) What is the output of the following code? ✓
assuming int size -> 4 bytes//

```
#include <stdio.h>
#include <stdlib.h>
struct a{
unsigned char x;
unsigned int y;
unsigned char z;
}b;
int main()
{
printf("%d",sizeof(b));
return 0;
}
```

6 ○

4 ○

8 ○

✓   12 ◉

1/1*   Q21) In 8-bit timer, To get a specific time we need 31,250 ticks ✓
What is the remainder ticks we have to start counting from it to get the
accurate time?

9 ○

122 ○

✓   18 ◉

256 ○

1/1　　　　　　　　　　* : Q2) In a file, the scope of this variable is ✓

All files ○

All static functions inside this file ○

All static functions ○

✓　　　　　　　　　　　　　　Only in the file ◉

1/1　　　　　　　　* ? Q39) What will be the output of the following code ✓

```c
#include <stdio.h>
struct data {
    int d: 5;
    int m: 4;
    int y;
};
int main()
{
    struct data dt = { 31, 12, 2014 };
    printf("Data is %d/%d/%d", dt.d, dt.m, dt.y);
    return 0;
}
```

Date is 31/12/2014 ○

✓　　　　　　　　　　　　　Date is -1/-4/2014 ◉

Date is 1/4/2014 ○

Date is -31/-12/2014 ○

1/1   * .Q31) Choose the correct Answer ✓

```c
#include <stdio.h>
void run_cb(int (*foo)());

int main()
{
    int cb();
    int (*fp)();
    fp = cb;
    run_cb(fp);
    return 0;
}
void run_cb(int (*foo)())
{
    (foo)();
}
int cb()
{
    printf("Learn-In-Depth");
}
```

Error: invalid parameter in function run_cb(). ◯

Error: invalid function call fb = cb; ◯

✓   No error and prints "Learn-In-Depth". ◉

No error and prints nothing. ◯

1/1   * Q22) I2C communication protocol ✓

Full Duplex ○

Pair to Pair ○

Asynchronous ○

✓   Half Duplex ◉

1/1   * ? Q35) What is the output of this C code ✓

```c
int main()
{
    short x = 30000;
    short y = 40000;
    int z = x+y;
    printf("%d", z);
    return 0;
}
```

z > 70000 ○

✓   z < 70000 ◉

z = 70000 ○

1/1   * = Q19) The physical address of any register ✓

✓   Offset Address + Base Address ⦿

Offset Address - Base Address ○

Base Address - Offset Address ○

Offset Address ○

1/1   *   Q14) What is the output of the following code ✓
#include <stdio.h>
#include <stdlib.h>
int main()
{
int x = 4;
if (x = -2)
printf ("hello");
else
printf ("hi");
return 0;
}

hi ○

✓   hello ⦿

hihello ○

hellohi ○

1/1   * Q30) We consider it the core of operating system ✓

✓   Kernel ◉

Scheduler ◯

NVIC ◯

Task ◯

1/1*   Q29) In a real time operating system any task could be in one of these ✓
status

Ready ◯

Running ◯

Block ◯

✓   All of the above ◉

1/1*   Q26) In SPI communication protocol, the master select a specific slave ✓
by:

✓   Make SS pin LOW ◉

Make SS pin HIGH ◯

Make MOSI pin LOW ◯

Send slave address ◯

1/1   *   Q9) What is the output of the following code? ✓

```
#include <stdio.h>
#include <stdlib.h>
int main()
{
int *(p)[2];
return 0;
}
```

Array of two integer elements   ◯

Pointer to array of two integer elements   ◯

✓   Array of two pointers to integers   ⦿

Syntax error   ◯

0/1   *   Q11) How many padding bytes in the following code?
                                               //assuming int size -> 4 bytes
                                                        #include <stdio.h>
                                                        #include <stdlib.h>
                                                        #pragma pack(2)
                                                        struct a{
                                                        unsigned char x;
                                                        unsigned int y;
                                                        unsigned char z;
                                                        }b;
                                                        int main()
                                                        {
                                                        return 0;
                                                        }

✗

8 ⦿

2 ◯

6 ◯

12 ◯

الإجابة الصحيحة

2 ⦿

1/1   * ? Q45) What will be the output of the following C code ✓

```
int* get_current_ptr(int B)
{
    int A=6;
    if(B==4) A=2*B;
    return &A;
}

int main()
{
    int* curr_ptr = get_current_ptr(4);
    printf("%d\n", *curr_ptr);
    return 0;
}
```

6 ○

10 ○

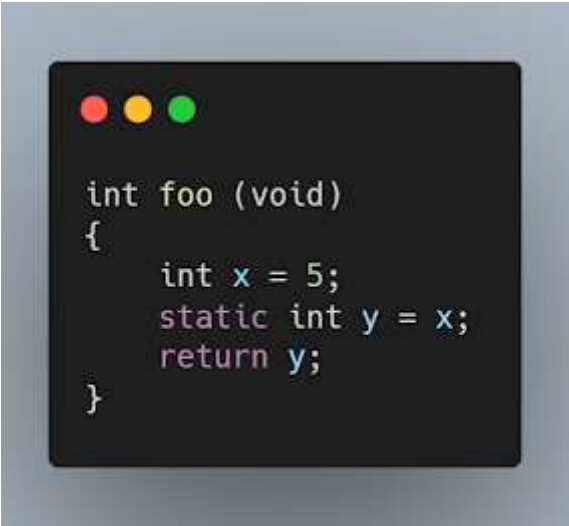✓   Runtime Error ⦿

Compilation Error ○

1/1

* ? Q40) What will be the output of the following C code ✓

```c
int main()
{
    int a[5]={5,1,15,20,25};
    int i,j,m;
    i=++a[1];
    j=a[1]++;
    m=a[i++];
    printf("%d, %d, %d", i, j, m);
    return 0;
}
```

2, 3, 20 ○

1, 2, 5 ○

3, 2, 15 ⦿

2, 1, 15 ○

✓

1/1   * .Q32) Choose the correct Answer ✓

```
int foo (void)
{
    int x = 5;
    static int y = x;
    return y;
}
```

Error: Lvalue required   ◯

Error: Rvalue required   ◯

✓   Error: Initializer element is not constant   ⦿

foo function returns 5   ◯

1/1   * ? Q44) What will be the output of the following C code ✓

```
int main()
{
    unsigned long int a=5;
    unsigned long int *b=&a;
    unsigned long int c=*b;
    a=7;
    printf("%lu\t %lu", *b, c);
    return 0;
}
```

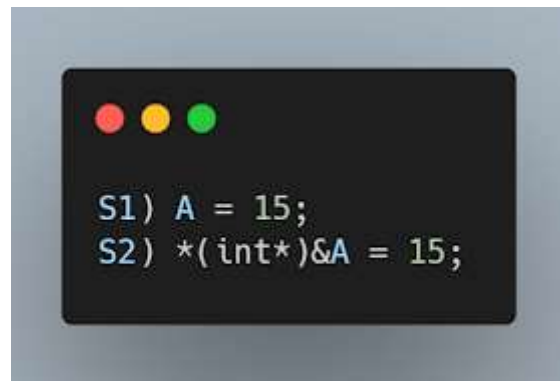✓   7 5 ⦿

                                                               7 7 ○

                                                               5 5 ○

                                                               5 7 ○

                                                          Option 5 ○

1/1   * Q24) Which from the following causes starvation in TWI ✓

✓   Clock Stretching ⦿

                                                          Arbitration ○

                                                      Stop Condition ○

                                                           A and C ○

1/1   * ? Q38) What will be the output of the following C code ✓

```
S1) A = 15;
S2) *(int*)&A = 15;
```

✓   Both modify the value of the variable to 15. ⦿

S1 in not valid while S1 is correct. ◯

S1 is correct while S2 will change the address only. ◯

We can't modify the value of A variable. ◯

1/1   * : Q28) The watchdog timer refresh time should be ✓

✓   < watchdog timer window time ⦿

> watchdog timer window time ◯

= watchdog timer window time ◯

>= watchdog timer window time ◯

1/1

*   Q15) What is the output of the following code ✓

```
#include <stdio.h>
#include <stdlib.h>
int main()
{
int arr[10];
int x = arr;
int y = &arr+1;
printf("%d", y-x);
return 0;
}
```

It depending on address bus ◯

1 ◯

✓   40 ◉

4 ◯

0/1   * … Q5) The keyword static affects on variable   ✗

      ✗

Scope ◯

Life time ◉

No effect ◯

It depends ◯

الإجابة الصحيحة

It depends ◉

التعليقات

Static global variables and functions are also possible in C/C++. The purpose of these is to limit scope of a variable or function to a file.

1/1   * Q20) Select the right formula to set bit (4) in a register called x   ✓

x = (x >> 4) & 1 ◯

x = (1 >> 4) & x ◯

x = (x << 4) | 1 ◯

✓   x = (1 << 4) | x ◉

1/1   * Q6) How to create a variable without allocate space in RAM ✓

Make it constant local ◯

Make it static local ◯

✓ Make it constant global ◉

Make it static global ◯

1/1   * Q13) What is the output of the following code ✓
// Assuming int size = 4 bytes
// Assuming address bus 4 bytes
// Assuming x stored in byte with address (00)
#include <stdio.h>
#include <stdlib.h>
int main()
{
    char x=12;
    int*ptr=&x;
    *ptr++;
    printf("x = %d , ptr = %d\n",x,ptr);
    return 0;
}

x = 13, ptr = 00 ◯

x = 12, ptr = 01 ◯

✓ x = 12, ptr = 04 ◉

x = 13, ptr = 01 ◯

0/1*   Q18) In ADC if your step size is 15 milli volt, what is the ADC reading if ✕
the analog input pin read 50 milli volt

✕

   3 ⦿

   4 ◯

  15 ◯

  50 ◯

الإجابة الصحيحة

   4 ⦿

0/1   * ? Q38) What will be the output of the following C code   ✕

```c
#include <stdio.h>
int* func(void)
{
    int a = 5;
    int *p = &a;
    return p;
}
int main()
{
    int x = 10;
    int b = *(func());
    printf("%d\n", b+x);
    return 0;
}
```

✕

Segmentation fault ◉

15 ○

Garbage Value ○

Runtime error ○

الإجابة الصحيحة

15 ◉

1/1   *   ?Q8) What is the output of the following code ✓

```
#include <stdio.h>
#include <stdlib.h>
int main()
{
char x = -128;
x>>=1;
printf("%d",x);
return 0;
}
```

-128 ◯

128 ◯

✓   -64 ⦿

64 ◯

0/1   * : Q3) One of the following is forbidden in embedded systems ✗

Continue ◯

Break ◯

✗   Inline function ⦿

Extern ◯

الإجابة الصحيحة

Continue ⦿

0/1   *   Q12) What is the output of the following code ✕

// Assuming int size = 4 bytes

// Assuming address bus 4 bytes

// Assuming x stored in byte with address (00)

#include <stdio.h>

#include <stdlib.h>

int main()

{

char x=12;

char*ptr=&x;

*ptr++;

printf("x = %d , ptr = %d\n",x,ptr);

return 0;

}

○ x = 13, ptr = 00

○ x = 12, ptr = 01

✕   ◉ x = 12, ptr = 04

○ x = 13, ptr = 01

الإجابة الصحيحة

◉ x = 12, ptr = 01

0/1   * ? Q41) What will be the output of the following C code ✕

```c
#include <stdio.h>

struct marks
{
    int a:3;
    int b:3;
    int c:2;
};

int main()
{
    struct marks m = {2, -6, 5};
    printf("%d, %d\n", sizeof(m), *((int*)&m));
    return 0;
}
```

✕

4, 82 ◉

4, 65050 ○

4, garbage value ○

1, 82 ○

الإجابة الصحيحة

4, garbage value ◉

1/1   * Q17) Two interrupts at the same time in Atmega32 ✓

✓   CPU serve the higher priority according to vector table ◉

CPU serve the interrupt from hardware source ○

Runtime error ○

CPU serve the interrupt from software source ○

* ? Q37) Which function will works well   ✕

```c
int funcA(int* arg1)
{
//Code
*arg1 = 0;
//Code
return ((*arg1)+5);
}
int g_var1;
int funcB(int arg1)
{
int z = 0;
//Code
z = g_var1 * arg1;
//Code
return z;
}
int funcC(int arg1)
{
int * z = NULL;
//Code
z = alloc_memory(4); //allocate 4 bytes
*z = 5* arg1;
//Code
return z;
}
```

✕

None   ◉

funcA & funC   ◯

funcA & funcB & funcC   ◯

funcA & funB   ◯

الإجابة الصحيحة

funcA & funcB & funcC

1/1*   Q16) Calculate over_flow_time of a 8 bit timer connected to 20 MHz ✓
frequency

50 nano seconds ◯

12800 micro seconds ◯

✓   12800 nano seconds ⬤

50 micro seconds ◯

1/1   * ? Q43) What will be the output of the following C code ✓

```c
struct data {
    int d: 5;
    int m: 4;
    int y;
};
int main()
{
    printf("Size of data is %lu bytes\n", sizeof(struct data));
    return 0;
}
```

✓   8 ⬤

12 ◯

6 ◯

2 ◯

1/1   * Q4) What is the size of int ✓

1 Byte ◯

2 Bytes ◯

4 Bytes ◯

✓   Compiler Dependent ◉

1/1*   Q1) If you push in the stack the following numbers -> 1,8,4,6 Which ✓
?number pop first

1 ◯

8 ◯

4 ◯

✓   6 ◉

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