QUIZ 3 (ARRAY& STRING)

Total points 26/40

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✓ Q10) What will be output if you will execute following c code? * 1/1

- (●) A ✓
- ( ) B
- ( ) C
- ( ) D
- ( ) E

✗ Q32)What will be the output of the program if the array begins at 65472 and each integer occupies 2 bytes? *0/1

```
#include<stdio.h>

int main()
{
    int a[3][4] = {1, 2, 3, 4, 4, 3, 2, 1, 7, 8, 9, 0};
    printf("%u, %u\n", a+1, &a+1);
    return 0;
}
```

- A. 65474, 65476
- B. 65480, 65496
- C. 65480, 65488
- D. 65474, 65488 ✗

Correct answer

- B. 65480, 65496

Feedback

Step 1: int a[3][4] = {1, 2, 3, 4, 4, 3, 2, 1, 7, 8, 9, 0}; The array a[3][4] is declared as an integer array having the 3 rows and 4 colums dimensions.

Step 2: printf("%u, %u\n", a+1, &a+1);

The base address(also the address of the first element) of array is 65472.

*For a two-dimensional array like a reference to array has type "pointer to array of 4 ints". Therefore, a+1 is pointing to the memory location of first element of the second row in array a. Hence 65472 + (4 ints * 2 bytes) = 65480*

*Then, &a has type "pointer to array of 3 arrays of 4 ints", totally 12 ints. Therefore, &a+1 denotes "12 ints * 2 bytes * 1 = 24 bytes".*

Hence, begining address 65472 + 24 = 65496. So, &a+1 = 65496

Hence the output of the program is 65480, 65496

✗ Q21) * 0/1

```c
#include<stdio.h>

int main()
{
    char p[] = "%d\n";
    p[1] = 'c';
    printf(p, 65);
    return 0;
}
```

- A. A
- B. a
- C. c
- D. 65 ✗

Correct answer

- A. A

Feedback

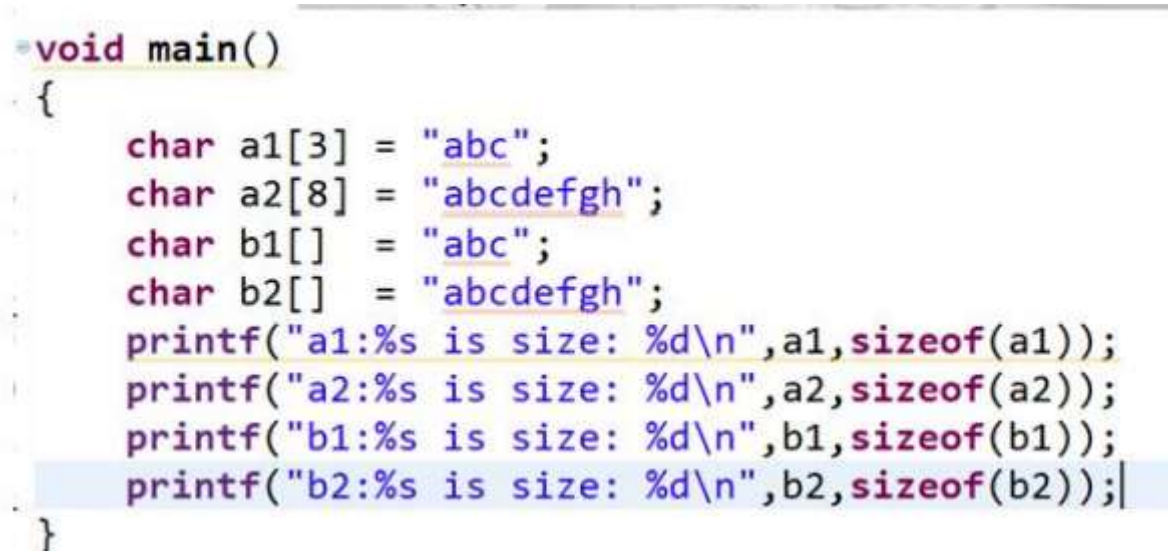
Step 1: char p[] = "%d\n"; The variable p is declared as an array of characters and initialized with string "%d".

Step 2: p[1] = 'c'; Here, we overwrite the second element of array p by 'c'. So array p becomes "%c".

Step 3: printf(p, 65); becomes printf("%c", 65);

Therefore it prints the ASCII value of 65. The output is 'A'.

✕ Q13)what will be output? * ⋯/1



```
void main()
{
    char a1[3] = "abc";
    char a2[8] = "abcdefgh";
    char b1[]  = "abc";
    char b2[]  = "abcdefgh";
    printf("a1:%s is size: %d\n",a1,sizeof(a1));
    printf("a2:%s is size: %d\n",a2,sizeof(a2));
    printf("b1:%s is size: %d\n",b1,sizeof(b1));
    printf("b2:%s is size: %d\n",b2,sizeof(b2));
}
```

a1:abc is size:3a2:abcdefgh is size: 8b1:abc is size:3b2:abcdefgh is size:8

Feedback

a1: is size:3
a2: is size:8
b1: is size:4
b2: is size:9

✓ Q3) * 1/1

What is right way to Initialize array?

A. int num[6] = { 2, 4, 12, 5, 45, 5 };
B. int n{} = { 2, 4, 12, 5, 45, 5 };
C. int n{6} = { 2, 4, 12 };
D. int n(6) = { 2, 4, 12, 5, 45, 5 };

- (●) A ✓
- ( ) B
- ( ) C
- ( ) D

✓ Q12) * 1/1

An array elements are always stored in _____ memory locations.

A. Sequential
B. Random
C. Sequential and Random
D. None of the above

- (●) A ✓
- ( ) B
- ( ) C
- ( ) D

✓ Q6)What will be output if you will execute following c code? 1/1

```
#include<stdio.h>
void main()
{
   char arr[7]="Network";
   printf("%s",arr);
  }
```

A- Network
B- N
C- network
D- Garbage value
E- Compiler error

- ○ A
- ○ B
- ○ C
- ◉ D ✓
- ○ E

✓ Q5) * 1/1

What will happen if in a C program you assign a value to an array element whose subscript exceeds the size of array?
A- The element will be set to 0.
B- The compiler would report an error.
C- The program may crash if some important data gets overwritten.
D- The array size would appropriately grow.

- ○ A
- ○ B
- ◉ C ✓
- ○ D

✗ Q20) * 0/1

```c
#include<stdio.h>
#include<string.h>

int main()
{
    char str1[20] = "Hello", str2[20] = " World";
    printf("%s\n", strcpy(str2, strcat(str1, str2)));
    return 0;
}
```

- A. Hello
- B. World
- C. Hello World
- D. WorldHello ✗

Correct answer

- C. Hello World

Feedback

Step 1: char str1[20] = "Hello", str2[20] = " World"; The variable str1 and str2 is declared as an array of characters and initialized with value "Hello" and " World" respectively.

Step 2: printf("%s\n", strcpy(str2, strcat(str1, str2)));

=> strcat(str1, str2)) it append the string str2 to str1. The result will be stored in str1. Therefore str1 contains "Hello World".

=> strcpy(str2, "Hello World") it copies the "Hello World" to the variable str2.

Hence it prints "Hello World".

✗ Q31)assume double=8 byte ,int=2 byte,char=1byte * 0/1

What will be output when you will execute following c code?

```
#include<stdio.h>
void main(){
    long double a;
    signed char b;
    int arr[sizeof(!a+b)];
    printf("%d",sizeof(arr));
}
```

- (A) 16 ✗
- (B) 4
- (C) 2
- (D) Compilation error
- (E) None of the above

Correct answer

- (B) 4

Feedback

Consider on the expression: !a + b
! Operator always return zero if a is non-zero number other wisie 1. In general we can say ! operator always returns an int type number. So
!a +b
=! (Any double type number) + Any character type number
= Any integer type number + any character type number
= Any integer type number
Note: In any expression lower type data is always automatically type casted into the higher data type. In this case char data type is automatically type casted into the int type data.
So sizeof (!a +b) = sizeof(Any int type number) = 2
So size of array arr is 2 and its data type is int. So
*sizeof(arr) = size of array * sizeof its data type = 2* 2= 4*

✓ Q39) * 1/1

```c
#include<stdio.h>

int main()
{
    char str[25] = "IndiaBIX";
    printf("%s\n", &str+2);
    return 0;
}
```

- (●) A. Garbage value ✓
- ( ) B. Error
- ( ) C. No output
- ( ) D. diaBIX

✕ Q7)What will be output if you will execute following c code? * 0/1

```
#include<stdio.h>
void main()
{
   char arr[11]="The African Queen";
   printf("%s",arr)
}
```

A- The African Queen
B- The
C- Queen
D- null
E- Compilation error

- ○ A
- ○ B
- ○ C
- ◉ D ✕
- ○ E

Correct answer

- ◉ E

Feedback

Size of any character array cannot be less than the number of characters in any string which it has assigned. Size of an array can be equal (excluding null character) or greater than but never less than.

✓ Q11) * 1/1

What will be the output of following program code?

```
#include <stdio.h>
int main(void)
{
    char p;
    char buf[10] = {1, 2, 3, 4, 5, 6,
 9, 8};
    p = (buf + 1)[5];
    printf("%d", p);
    return 0;
}
```

- 5
- 6
- 9 ✓
- error
- none of the above

✗ Q22) * 0/1

```c
#include<stdio.h>
#include<string.h>

int main()
{
    printf("%d\n", strlen("123456"));
    return 0;
}
```

- A. 6
- B. 12
- C. 7 ✗
- D. 2

Correct answer

- A. 6

✓ Q29)assume int is 2byte * 1/1

What will be output when you will execute following c code?

```
#include<stdio.h>
void main(){
    int arr[][3]={{1,2},{3,4,5},{5}};
    printf("%d %d %d",sizeof(arr),arr[0][2],arr[1][2]);
}
```

- (A) 12 3 5
- (B) 18 0 5 ✓
- (C) 12 0 5
- (D) 18 3 5
- (E) Compilation error

✗ Q14) ···/1

```
void main()
{
    int a;
    int b;
    for (a = 0,b = 0;a < 10,b < 5;a++,b++)
    {
        printf("%d %d\n",a,b);
    }
}
```

112233445566778899

Feedback

0 0
1 1
2 2
3 3
4 4

✓ Q2)In C, if you pass an array as an argument to a function, what actually gets passed? *1/1

- ○ Value of elements in array
- ○ First element of the array
- ◉ Base address of the array ✓

✓ Q23) 1/1

```
#include<stdio.h>

int main()
{
    printf(5+"Good Morning\n");
    return 0;
}
```

- A. Good Morning
- B. Good
- C. M
- D. Morning ✓

✓ Q25) 1/1

```
#include<stdio.h>

int main()
{
    printf("India", "BIX\n");
    return 0;
}
```

- A. Error
- B. India BIX
- C. India ✓
- D. BIX

✗ Q9)What will be output if you will execute following c code? * 0/1

```
#include<stdio.h>
void main()
{
   int const SIZE=5;
   int expr;
   double value[SIZE]={2.0,4.0,6.0,8.0,10.0};
   expr=1|2|3|4;
   printf("%f",value[expr]);
}
```

A-2.000000
B-4.000000
C-6.000000
D-8.000000
E- Compilation error

- (●) A ✗
- ( ) B
- ( ) C
- ( ) D
- ( ) E

Correct answer

- (●) E

✓ Q16)How will you print \n on the screen? * 1/1

- ( ) printf("\n");
- ( ) echo "\\n";
- ( ) printf('\n');
- (●) printf("\\n") ✓

✗ Q18)Which of the following function is used to find the first occurrence of a given string in another string? *0/1

- (●) A . strchr() ✗
- ( ) B. strrchr()
- ( ) C. strstr()
- ( ) D. strnset()

Correct answer

- (●) C. strstr()

✓ Q24) 1/1

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

int main()
{
    char str[] = "India\0\BIX\0";
    printf("%s\n", str);
    return 0;
}
```

- ( ) A. BIX
- (●) B. India ✓
- ( ) C. India BIX
- ( ) D. India\0BIX

✕ Q38) * 0/1

```c
#include<stdio.h>

int main()
{
    int i;
    char a[] = "\0";
    if(printf("%s", a))
        printf("The string is not empty\n");
    else
        printf("The string is empty\n");
    return 0;
}
```

- (●) The string is not empty ✕
- ( ) B. The string is empty
- ( ) C. No output
- ( ) D. 0

Correct answer

- (●) B. The string is empty

Feedback

The function printf() returns the number of charecters printed on the console.

Step 1: char a[] = '\0'; The variable a is declared as an array of characters and it initialized with "\0". It denotes that the string is empty.

Step 2: if(printf("%s", a)) The printf() statement does not print anything, so it returns '0'(zero). Hence the if condition is failed.

In the else part it prints "The string is empty".

✓ Q35) * 1/1

```c
#include<stdio.h>

int main()
{
    char str1[] = "Hello";
    char str2[] = "Hello";
    if(str1 == str2)
        printf("Equal\n");
    else
        printf("Unequal\n");
    return 0;
}
```

- A. Equal
- B. Unequal ✓
- C. Error
- D. None of above

✓ Q28) 1/1

```c
#include<stdio.h>
#include<string.h>

int main()
{
    static char str1[] = "dills";
    static char str2[20];
    static char str3[] = "Daffo";
    int i;
    i = strcmp(strcat(str3, strcpy(str2, str1)), "Daffodills");
    printf("%d\n", i);
    return 0;
}
```

- (●) A. 0 ✓
- ( ) B. 1
- ( ) C. 2
- ( ) D. 4

✓ Q37)What will be the output of the following program in 16 bit platform assuming that 1022 is memory address of the string "Hello1" *1/1

```
#include<stdio.h>

int main()
{
    printf("%u %s\n", &"Hello1", &"Hello2");
    return 0;
}
```

- (●) A. 1022 Hello2 ✓
- ( ) B. Hello1 1022
- ( ) C. Hello1 Hello2
- ( ) D. 1022 1022
- ( ) E. Error

✓ Q19)Which of the following function is more appropriate for reading in a multi-word string? *1/1

- ( ) A. printf();
- ( ) B. scanf();
- (●) C. gets(); ✓
- ( ) D. puts();

✓ Q40) * 1/1

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

int main()
{
    char sentence[80];
    int i;
    printf("Enter a line of text\n");
    gets(sentence);
    for(i=strlen(sentence)-1; i >=0; i--)
        putchar(sentence[i]);
    return 0;
}
```

- A. The sentence will get printed in same order as it entered
- B. The sentence will get printed in reverse order ✓
- C. Half of the sentence will get printed
- D. None of above

✓ Q15) If the two strings are identical, then strcmp() function returns * 1/1

- -1
- 1
- 0 ✓
- Yes

✓ Q26) * 1/1

```c
#include<stdio.h>

int main()
{
    char *names[] = { "Suresh", "Siva", "Sona", "Baiju", "Ritu"};
    int i;
    char *t;
    t = names[3];
    names[3] = names[4];
    names[4] = t;
    for(i=0; i<=4; i++)
        printf("%s,", names[i]);
    return 0;
}
```

- A. Suresh, Siva, Sona, Baiju, Ritu
- B. Suresh, Siva, Sona, Ritu, Baiju ✓
- C. Suresh, Siva, Baiju, Sona, Ritu
- D. Suresh, Siva, Ritu, Sona, Baiju

✕ Q27) * 0/1

```c
#include<stdio.h>
#include<string.h>

int main()
{
    char str[] = "India\0BIX\0";
    printf("%d\n", strlen(str));
    return 0;
}
```

- A. 10
- B. 6 ✕
- C. 5
- D. 11

Correct answer

- C. 5

Feedback

The function strlen returns the number of characters int the given string.

Therefore, strlen(str) becomes strlen("India") contains 5 characters. A string is a collection of characters terminated by '\0'.

The output of the program is "5"

✓ Q8)What will be output if you will execute following c code? * 1/1

```
#include<stdio.h>
void main()
{
   char arr[20]="MysticRiver";
   printf("%d",sizeof(arr));
}
```

A- 20
B- 11
C- 12
D- 22
E- 24

- (●) A ✓
- ( ) B
- ( ) C
- ( ) D
- ( ) E

✓ Q4)What will be the output of the program? * 1/1

```
#include<stdio.h>
void 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);
}
```

A. 3, 2, 15

B. 2, 3, 20

C. 2, 1, 15

D. 1, 2, 5

- (●) A ✓
- ( ) B
- ( ) C
- ( ) D

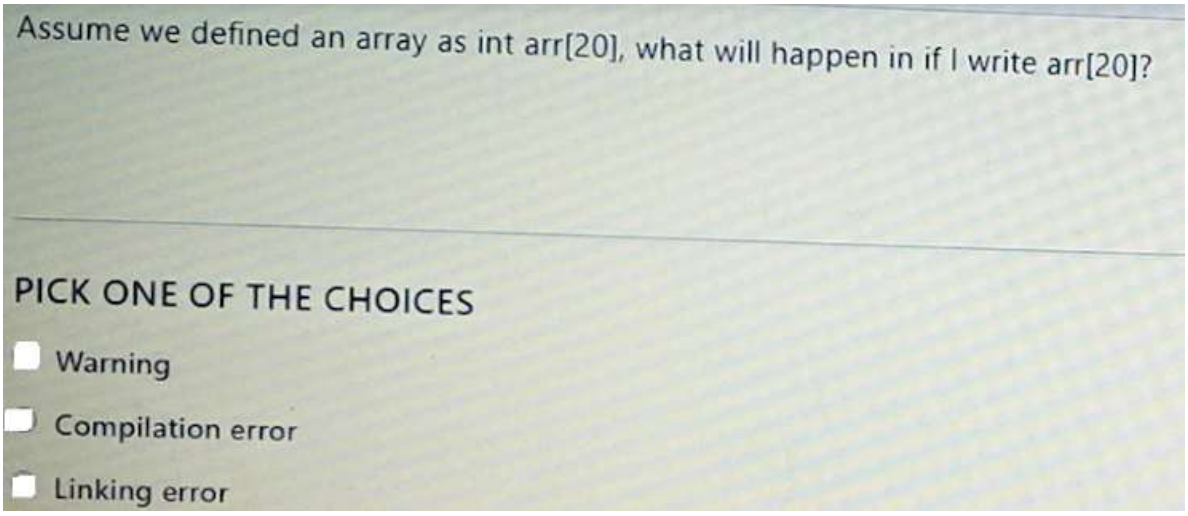
✓ Q33) * 1/1

```
#include<stdio.h>

int main()
{
    int arr[1]={10};
    printf("%d\n", 0[arr]);
    return 0;
}
```

- ( ) A. 1
- (●) B. 10 ✓
- ( ) C. 0
- ( ) D. 6

✗ Q1) * 0/1



◉ Option 1 ✗

○ Option 2

○ Option 3

Correct answer

◉ Option 2

✓ Q34)What will be the output of the program if the array begins 1200 in memory? *1/1

```
#include<stdio.h>

int main()
{
    int arr[]={2, 3, 4, 1, 6};
    printf("%u, %u, %u\n", arr, &arr[0], &arr);
    return 0;
}
```

- A. 1200, 1202, 1204
- B. 1200, 1200, 1200 ✓
- C. 1200, 1204, 1208
- D. 1200, 1202, 1200

✓ Q36) * 1/1

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

int main()
{
    printf("%c\n", "abcdefgh"[4]);
    return 0;
}
```

- A. Error
- B. d
- C. e ✓
- D. abcdefgh

✗ Q17)The library function used to find the last occurrence of a character in a string is *0/1

- trnstr()
- laststr() ✗
- strrchr()
- strstr()

Correct answer

- strrchr()

✓ Q30) * 1/1

What will be output when you will execute following c code?

```
#include<stdio.h>
void main(){
    int xxx[10]={5};
    printf("%d %d",xxx[1],xxx[9]);
}
```

- (A) Garbage Garbage
- (B) 0 0 ✓
- (C) null null
- (D) Compilation error
- (E) None of the above