- 1. What is (void\*)0?
  - A. Representation of NULL pointer
  - **B.** Representation of void pointer
  - C. Error
  - D. None of above

Answer: Option A Explanation:

No answer description available for this question. Let us discuss.

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2. Can you combine the following two statements into one?

```
char *p;
p = (char*) malloc(100);
```

- A. char p = \*malloc(100);
- B. char \*p = (char) malloc(100);
- C. char \*p = (char\*)malloc(100);
- $\underline{D.} \quad \text{char *p = (char *)(malloc*)(100);}$

Answer: Option C Explanation:

No answer description available for this question. Let us discuss.

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- 3. In which header file is the NULL macro defined?
  - A. stdio.h
  - B. stddef.h
  - C. stdio.h and stddef.h
  - D. math.h

Answer: Option C

**Explanation:** 

The macro "NULL" is defined in locale.h, stddef.h, stdio.h, stdlib.h, string.h, time.h, and wchar.h. <u>View Answer Discuss</u> in Forum Workspace Report

- 4. How many bytes are occupied by near, far and huge pointers (DOS)?
  - A. near=2 far=4 huge=4
  - B. near=4 far=8 huge=8

- C. near=2 far=4 huge=8
- D. near=4 far=4 huge=8

Answer: Option A Explanation:

near=2, far=4 and huge=4 pointers exist only under DOS. Under windows and Linux every

pointers is 4 bytes long.

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- 5. If a variable is a pointer to a structure, then which of the following operator is used to access data members of the structure through the pointer variable?
  - <u>A.</u> .
  - <u>B.</u> &
  - <u>C.</u> \*
  - **D**. ->

Answer: Option D

- 6. What would be the equivalent pointer expression for referring the array element a[i][j][k][1]
  - $\underline{\mathbf{A}}. \quad ((((a+i)+j)+k)+l)$
  - B. \*(\*(\*(\*(a+i)+j)+k)+l)
  - <u>C.</u> (((a+i)+j)+k+l)
  - D. ((a+i)+j+k+l)Answer: Option B

Explanation:

No answer description available for this question. Let us discuss.

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- 7. A pointer is
  - A. A keyword used to create variables
  - **B.** A variable that stores address of an instruction
  - C. A variable that stores address of other variable
  - D. All of the above

Answer: Option C Explanation:

No answer description available for this question. Let us discuss.

- 8. The operator used to get value at address stored in a pointer variable is
  - <u>A.</u> \*
  - **B.** &
  - <u>C.</u> &&
  - **D**. ||

Answer: Option A

1. What will be the output of the program?

```
#include<stdio.h>
int main()
{
    static char *s[] = {"black", "white", "pink", "violet"};
    char **ptr[] = {s+3, s+2, s+1, s}, ***p;
    p = ptr;
    ++p;
    printf("%s", **p+1);
    return 0;
}
```

- A. ink
- B. ack
- C. ite
- D. let

Answer: Option A

**Explanation:** 

No answer description available for this question. Let us discuss.

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```
#include<stdio.h>
int main()
{
   int i=3, *j, k;
   j = &i;
   printf("%d\n", i**j*i+*j);
   return 0;
```

}

<u>A.</u> 30

**B.** 27

<u>C.</u> 9

<u>D.</u> 3

Answer: Option A

**Explanation:** 

No answer description available for this question. Let us discuss.

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3. What will be the output of the program?

```
#include<stdio.h>
int main()
{
   int x=30, *y, *z;
   y=&x; /* Assume address of x is 500 and integer is 4 byte size */
   z=y;
   *y++=*z++;
   x++;
   printf("x=%d, y=%d, z=%d\n", x, y, z);
   return 0;
}
```

**A.** x=31, y=502, z=502

**B.** x=31, y=500, z=500

**C.** x=31, y=498, z=498

D. x=31, y=504, z=504

Answer: Option D Explanation:

No answer description available for this question. Let us discuss.

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```
#include<stdio.h>
int main()
{
    char str[20] = "Hello";
    char *const p=str;
    *p='M';
    printf("%s\n", str);
    return 0;
```

}

- A. Mello
- B. Hello
- C. HMello
- D. MHello

Answer: Option A Explanation:

No answer description available for this question. Let us discuss.

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5. What will be the output of the program If the integer is 4bytes long?

```
#include<stdio.h>
int main()
{
    int ***r, **q, *p, i=8;
    p = &i;
    q = &p;
    r = &q;
    printf("%d, %d, %d\n", *p, **q, ***r);
    return 0;
}
```

- A. 8, 8, 8
- **B.** 4000, 4002, 4004
- **C.** 4000, 4004, 4008
- **D.** 4000, 4008, 4016

Answer: Option A

```
#include<stdio.h>

void fun(void *p);
int i;
int main()
{
    void *vptr;
    vptr = &i;
    fun(vptr);
    return 0;
}
void fun(void *p)
```

```
int **q;
  q = (int**)&p;
  printf("%d\n", **q);
}
```

- A. Error: cannot convert from void\*\* to int\*\*
- B. Garbage value
- <u>C.</u> 0
- D. No output

Answer: Option C

**Explanation:** 

No answer description available for this question. Let us discuss.

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7. What will be the output of the program?

```
#include<stdio.h>
int main()
{
    char *str;
    str = "%s";
    printf(str, "K\n");
    return 0;
}
```

- A. Error
- B. No output
- <u>C.</u> K
- D. %s

Answer: Option C

**Explanation:** 

No answer description available for this question. Let us discuss.

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```
#include<stdio.h>
int *check(static int, static int);

int main()
{
    int *c;
    c = check(10, 20);
    printf("%d\n", c);
    return 0;
```

```
}
int *check(static int i, static int j)
{
    int *p, *q;
    p = &i;
    q = &j;
    if(i >= 45)
        return (p);
    else
        return (q);
}
```

- <u>A.</u> 10
- **B.** 20
- C. Error: Non portable pointer conversion
- D. Error: cannot use static for function parameters

Answer: Option D Explanation:

No answer description available for this question. Let us discuss.

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9. What will be the output of the program if the size of pointer is 4-bytes?

```
#include<stdio.h>
int main()
{
    printf("%d, %d\n", sizeof(NULL), sizeof(""));
    return 0;
}
```

- A. 2, 1
- **B.** 2, 2
- **C.** 4, 1
- **D.** 4, 2

Answer: Option C Explanation:

In TurboC, the output will be 2, 1 because the size of the pointer is 2 bytes in 16-bit platform.

But in Linux, the output will be 4, 1 because the size of the pointer is 4 bytes.

This difference is due to the platform dependency of C compiler. View Answer Discuss in Forum Workspace Report

```
#include<stdio.h>
int main()
{
    void *vp;
    char ch=74, *cp="JACK";
    int j=65;
    vp=&ch;
    printf("%c", *(char*)vp);
    vp=&j;
    printf("%c", *(int*)vp);
    vp=cp;
    printf("%s", (char*)vp+2);
    return 0;
}
```

- A. JCK
- **B.** J65K
- C. JAK
- D. JACK

Answer: Option D Explanation:

11. What will be the output of the program?

```
#include<stdio.h>
int main()
{
   int arr[2][2][2] = {10, 2, 3, 4, 5, 6, 7, 8};
   int *p, *q;
   p = &arr[1][1][1];
   q = (int*) arr;
   printf("%d, %d\n", *p, *q);
   return 0;
}
```

- A. 8, 10
- **B.** 10, 2
- <u>C.</u> 8, 1
- D. Garbage values

Answer: Option A Explanation:

No answer description available for this question. <u>Let us discuss</u>. <u>View Answer Discuss</u> in Forum Workspace Report

12. What will be the output of the program assuming that the array begins at the location 1002 and size of an integer is 4 bytes?

```
#include<stdio.h>
int main()
{
   int a[3][4] = { 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12 };
   printf("%u, %u, %u\n", a[0]+1, *(a[0]+1), *(*(a+0)+1));
   return 0;
}
```

- **A.** 448, 4, 4
- **B.** 520, 2, 2
- **C.** 1006, 2, 2
- D. Error

Answer: Option C Explanation:

No answer description available for this question. Let us discuss.

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13. What will be the output of the program?

```
#include<stdio.h>
int main()
{
    int arr[3] = {2, 3, 4};
    char *p;
    p = arr;
    p = (char*)((int*)(p));
    printf("%d, ", *p);
    p = (int*)(p+1);
    printf("%d", *p);
    return 0;
}
```

- **A**. 2, 3
- **B.** 2, 0
- C. 2, Garbage value
- **D.** 0, 0

Answer: Option B

**Explanation:** 

No answer description available for this question. Let us discuss.

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14. What will be the output of the program?

```
#include<stdio.h>
int main()
{
    char *str;
    str = "%d\n";
    str++;
    str++;
    printf(str-2, 300);
    return 0;
}
```

- A. No output
- **B.** 30
- <u>C.</u> 3
- D. 300

Answer: Option D Explanation:

No answer description available for this question. Let us discuss.

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15. What will be the output of the program?

```
#include<stdio.h>
int main()
{
    printf("%c\n", 7["IndiaBIX"]);
    return 0;
}
```

- A. Error: in printf
- **B.** Nothing will print
- C. print "X" of IndiaBIX
- D. print "7"

Answer: Option C Explanation:

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

```
int main()
{
    char str[] = "peace";
    char *s = str;
    printf("%s\n", s++ +3);
    return 0;
}
```

- A. peace
- B. eace
- C. ace
- D. ce

**Answer:** Option **D Explanation:** 

No answer description available for this question. Let us discuss.

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17. What will be the output of the program?

```
#include<stdio.h>
int main()
{
    char *p;
    p="hello";
    printf("%s\n", *&*&p);
    return 0;
}
```

- A. Ilo
- B. hello
- C. ello
- D. h

Answer: Option B Explanation:

Explanation:

No answer description available for this question. Let us discuss.

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18. What will be the output of the program assuming that the array begins at location 1002?

```
return 0;
}
```

- <u>A.</u> 1002, 2004, 4008, 2
- **B.** 2004, 4008, 8016, 1
- <u>C.</u> 1002, 1002, 1002, 1
- D. Error

Answer: Option C Explanation:

No answer description available for this question. Let us discuss.

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19. What will be the output of the program?

```
#include<stdio.h>
power(int**);
int main()
{
    int a=5, *aa; /* Address of 'a' is 1000 */
    aa = &a;
    a = power(&aa);
    printf("%d\n", a);
    return 0;
}
power(int **ptr)
{
    int b;
    b = **ptr***ptr;
    return (b);
}
```

- <u>A.</u> 5
- **B.** 25
- C. 125
- D. Garbage value

Answer: Option B Explanation:

No answer description available for this question. Let us discuss.

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```
#include<stdio.h>
int main()
{
    char str1[] = "India";
```

```
char str2[] = "BIX";
char *s1 = str1, *s2=str2;
while(*s1++ = *s2++)
    printf("%s", str1);

printf("\n");
return 0;
}
```

- A. IndiaBIX
- B. BndiaBldiaBlXia
- C. India
- D. (null)

**Answer:** Option **B** 

21. What will be the output of the program?

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

int main()
{
    int i, n;
    char *x="Alice";
    n = strlen(x);
    *x = x[n];
    for(i=0; i<=n; i++)
    {
        printf("%s ", x);
        x++;
    }
    printf("\n", x);
    return 0;
}</pre>
```

- A. Alice
- B. ecilA
- C. Alice lice ice ce e
- D. lice ice ce e

Answer: Option D Explanation:

If you compile and execute this program in windows platform with Turbo C, it will give "lice ice ce e".

It may give different output in other platforms (depends upon compiler and machine). The online C compiler given in this site will give the Option C as output (it runs on Linux platform).

22. What will be the output of the program?

```
#include<stdio.h>
int main()
{
    int i, a[] = {2, 4, 6, 8, 10};
    change(a, 5);
    for(i=0; i<=4; i++)
        printf("%d, ", a[i]);
    return 0;
}
void change(int *b, int n)
{
    int i;
    for(i=0; i<n; i++)
        *(b+1) = *(b+i)+5;
}</pre>
```

- A. 7, 9, 11, 13, 15
- **B.** 2, 15, 6, 8, 10
- C. 246810
- **D.** 3, 1, -1, -3, -5

Answer: Option B Explanation:

No answer description available for this question. Let us discuss.

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23. If the size of integer is 4bytes, What will be the output of the program?

```
#include<stdio.h>
int main()
{
   int arr[] = {12, 13, 14, 15, 16};
   printf("%d, %d, %d\n", sizeof(arr), sizeof(*arr), sizeof(arr[0]));
   return 0;
}
```

- A. 10, 2, 4
- B. 20, 4, 4
- **C.** 16, 2, 2
- D. 20, 2, 2

**Answer: Option B** 

1. Point out the compile time error in the program given below.

```
#include<stdio.h>
int main()
{
   int *x;
   *x=100;
   return 0;
}
```

- A. Error: invalid assignment for x
- B. Error: suspicious pointer conversion
- C. No error
- D. None of above

Answer: Option C

**Explanation:** 

While reading the code there is no error, but upon running the program having an unitialised variable can cause the program to crash (Null pointer assignment).

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2. Point out the error in the program

```
#include<stdio.h>
int main()
{
    int a[] = {10, 20, 30, 40, 50};
    int j;
    for(j=0; j<5; j++)
    {
        printf("%d\n", a);
        a++;
    }
    return 0;
}</pre>
```

- A. Error: Declaration syntax
- B. Error: Expression syntax
- C. Error: LValue required
- D. Error: Rvalue required

Answer: Option C

1. Which of the following statements correctly declare a function that receives a pointer to pointer to a float?

```
A. float **fun(float***);
B. float *fun(float***);
C. float fun(float***);
D. float ****fun(float***);
Answer: Option D
Explanation:
No answer description available for this question. Let us discuss.
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```

2. Which of the statements is correct about the program?

```
#include<stdio.h>
int main()
{
   int i=10;
   int *j=&i;
   return 0;
}
```

- A. j and i are pointers to an int
- B. i is a pointer to an int and stores address of j
- C. j is a pointer to an int and stores address of i
- D. j is a pointer to a pointer to an int and stores address of i

Answer: Option C Explanation:

No answer description available for this question. Let us discuss.

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3. Which of the statements is correct about the program?

```
#include<stdio.h>
int main()
{
    float a=3.14;
    char *j;
    j = (char*) &a;
    printf("%d\n", *j);
    return 0;
}
```

A. It prints ASCII value of the binary number present in the first byte of a float variable a.

- B. It prints character equivalent of the binary number present in the first byte of a float variable a.
- C. It will print 3
- D. It will print a garbage value

Answer: Option A Explanation:

No answer description available for this question. Let us discuss.

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4. In the following program add a statement in the function fun() such that address of a gets stored in †?

```
#include<stdio.h>
int main()
{
    int *j;
    void fun(int**);
    fun(&j);
    return 0;
}
void fun(int **k)
{
    int a=10;
    /* Add a statement here */
}
```

- **A.** \*\*k=a;
- **B.** k=&a;
- **C.** \*k=&a
- D. &k=\*a

Answer: Option C Explanation:

No answer description available for this question. Let us discuss.

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5. Which of the following statements correct about k used in the below statement?

char \*\*\*\*k;

- A. k is a pointer to a pointer to a pointer to a char
- B. k is a pointer to a pointer to a pointer to a pointer to a char
- C. k is a pointer to a char pointer
- D. k is a pointer to a pointer to a char

**Answer: Option B** 

6. Which of the statements is correct about the program?

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

- A. Output: Garbage value
- B. Output: 1
- C. Output: 3
- D. Error: Invalid indirection

Answer: Option D Explanation:

No answer description available for this question. Let us discuss.

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7. Which statement will you add to the following program to ensure that the program outputs "IndiaBIX" on execution?

- **A.** \*pt=";
- **B.** pt='\0';
- **C.** pt='\n';
- p. \*pt='\0';

Answer: Option D

**Explanation:** 

No answer description available for this question. Let us discuss.

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8. In the following program add a statement in the function fact () such that the factorial gets stored in j.

```
#include<stdio.h>
void fact(int*);
int main()
{
    int i=5;
    fact(&i);
    printf("%d\n", i);
    return 0;
}

void fact(int *j)
{
    static int s=1;
    if(*j!=0)
    {
        s = s**j;
        *j = *j-1;
        fact(j);
        /* Add a statement here */
    }
}
```

- **A.** j=s;
- **B.** \*j=s;
- <u>C.</u> \*j=&s;
- D. &j=s;

Answer: Option B