Cradle of Bytes

- All questions have negative marking which is 1/3rd of its mark(s).
- Q 1 to 37 are of 1 mark each.
- Q 38 to 41 are of 2 marks each.

1. The following program fragment

```
int i=5;
do{
        putchar(i + 100);
        printf("%d",i--);
}while(i);
```

results in the printing of

(a) i5h4g3f2el (b) i4h3g2fle0
(c) an error message (d) none of the above

2. The following program fragment

```
int i = 107,
int x = 5;
printf((x>7) ? "%d" : "%c",i);
```

(a) an excution error (b) a syntax error
(c) printing of k (d) none of the above

3. The following loop

```
while(printf("%d", printf("az"))
        printf("by");
```

(a) prints azbybyby... (b) prints azbyazbyazby..
(c) az2byaz2by... (d) none of above

4. The following program

```
static char a[3][4] = {"abcd", "mnop", "fghi"};
putchar(**a);
```

(a) will not compile successfully (b) results in run-time
(c) prints garbage (d) none of above

5. The following program

```
void inc(){
   static int x;
   printf("%d",++x);
}
int main(){
```

```
    inc(); inc(); inc();
    return 0;
}
```

(a) prints 012 (b) prints 123 (c) prints 111
(d) prints 3 consecutive, but unpredictable numbers

6. What will be the output of following program?

```
const char *p = "abc";
char* const q  = "abc";
puts(p++);
puts(q++);
```

(a) abc (b) bc (c) bc (d) compile time error
abc bc abc

7. calloc(m,n) is equivalent to :
(a) malloc(m*n, 0); (b) memset(0,m*n);
(c) ptr=malloc(m*n); memset(ptr.0,m*n); (d) ptr=malloc(m*n);strcpy(ptr,0);

8. Consider the program fragment

```
j=2;
while((i%j)!=0)
j=j+1;
if(j<i)printf("%d",j);
```

If i >=2 , then the value of j , will be printed only if
(a) i is prime (b) j does not divide i (c) j is odd (d) i is not prime

9. What does the following for loop print ?

```
for(i=0;i<10;++i)
printf("%d" , i & 1);
```

(a) 0101010101 (b) 0111111111 (c) 0000000000 (d) 1111111111

10. As soon as a pointer variable is freed, its value
(a) is set to null (b) becomes unpredictable
(c) is set to 1 (d) remains the same

11. Consider the following program fragment and tell what will be the output ?

```
int v=3 , *pv = &v;
printf (" %d  %d" , v, *pv);
```

(a) An error message (b) address of v (c) 3 3 (d) None of the above

12. Puts(argv[0]);
(a) Prints the name of the source code file (b) Prints argv
(c) Prints the number of command line arguments
(d) Prints the name of the executable code file

13. If n has the value 3 , then the statement a[++n] = n++;
    (a) Assigns 3 to a[5] (b) Assigns 4 to a[5]
    (c) Assigns 4 to a[4] (d) Compiler –dependent

14. Which of the following features of C is meant to provide reliable access to special memory locations?
    (a) static_const (b) pragma (c) volatile (d) immutable

15. Which option will be printed by following statements

```
for(i=3;i<15;i+=3){
        printf("%d",i);
        ++i;
}
```

    (a) 3 6 9 12 (b) 3 6 9 12 15 (c) 3 7 11 (d) 3 7 11 15

16. What value must a destructor return?
    (a) A pointer to the class (b) An object of the class.
    (c) A status code determining whether the class was destructed correctly
    (d) Destructors do not return a value.

17. What will call to subroutine f return ???

```
int fred = 0;
void g(int fred) {
        fred = 13 ;
}
int f() {
        int fred = 42 ;
        g( fred ) ;
        return fred ;
}
```

    (a) 0 (b) 13 (c) 42 (d) 5

18. We want the code to go into infinite loop but why doesn't it actually goes!?!? :(

```
enum {true,false};
int main() {
        int i=1;
        do {
                printf("%d\n",i);
                i++;
                if(i < 15)
                        continue;
        }while(true);
        return 0;
}
```

Write you ans here:

19. What will be output of following code ?

```
void main(){
        int i =0, a[3];
        a[i]=i++;
        printf("%d",a[i]);
}
```

(a) 1 (b) 2 (c) 0 (d) garbage value

20. When you run below program, what will you get ?

```
#include <stdio.h>
#define SIZE 15
int main(){
        int *a, i;
        a = malloc(SIZE*sizeof(int));
        for (i=0; i<SIZE; i++)
                *(a + i) = i * i;
        for (i=0; i<SIZE; i++)
                printf("%d ", *a++);
        free(a);
        return 0;
}
```

(a) Compiler error (b) 1 2 4 16 25 36 64 81 100 125
(c)Runtime error (d) none of these

21. When you run below program, what will you get ?

```
#include<stdio.h>
int main() {
        int a=1;
        switch(a) {
                case '1':
                        printf("ONE\n");
                        break;
                case '2':
                        printf("TWO\n");
                        break;
                default:
                        printf("I shouldnt be printing this :/ \n");
        }
        return 0;
}
```

(a) I shouldnt be printing this :/ (b) ONE (c) TWO (d) error

22. Find the ouput :

```
void main()
{
        char arr[]= “Hello”;
        strcat(arr,’ !’);
         puts(arr);
}
```

(a) Hello! (b) Hello ! (c) Compiler error (d) runtime error

23. IS following code correct

```
const int x= 10;
int arr[x];
```

(a) Yes (b) no

24. What will be the output of below program ?

```
#define square(x) x*x
void main()
{
        int  m;
        m = 64/ square(4);
        printf(“%d”,m);
}
```

(a)64 (b) 4 (c) 1 (d) can’t say

25. What will be the output of below program ?

```
void main()
{
        int x = 2, y, z;
        x *= y = z = 4;
        z = y == z;
        x == (y == z);
        cout << x << y << z;
}
```

(a) 141 (b) 441 (c) 841 (d) 041

26. When we run below program, whether it will get error or not ? If not, what will the output ??

```
void main(){
        extern int n;
        n =10 ;
        cout<<n;
}
```

(a) 10 (b) 0 (c) compiler error (d) Linker error

27. When we run below program, whether it will get error or not ? If not, what will the output ??

```
char* fun(){
        char* temp = “Teqnix_Softmania”;
```

```
        return  temp;
    }
    void main(){
        puts(fun());
    }
```

(a) Teqnix_Softmania (b)Null Pointer Exception
(c) Compile error (d)dangling pointers

28. When we run below program, whether it will get error or not ? If not, what will the output ??

```
printf("xy","ab","mn");
```

(a) xy (b) xy ab mn (c) garbage value (d) Error

29. What will be the output of below program ?

```
void main(){
    int i=1;
    switch(i){
        cout<<"Hello ";
        case 1 :    cout<<"CRADLE OF BYTES,";
        case 2 :    cout<< " TEQNIX 13";
        default:    cout<<" !";
    }
}
```

(a)Hello CRADLE OF BYTES,TEQNIX 13 ! (b) Compiler error
(c) Hello CRADLE OF BYTES (d)CRADLE OF BYTES,TEQNIX 13 !

30. Copy constructors must receive their arguments by :
(a) either pass by value or pass by reference (b) pass by value only
(c) pass by reference only (d) pass by address only

31. If the programmer does not explicitly provide a destructor, then which of the following creates an empty destructor

(a) Compiler (b) linker (c) Preprocessor (d) main() function

32. Which of the following statements are correct ?
(a) Data items in a class must be private.
(b) Both data and functions can be either private or public.
(c) Constructor of a class cannot be virtual
(d) It is necessary to explicitly provide constructor

33. Find output

```
#define ARRAY_NUMBERS (sizeof(a) / sizeof(a[0]))

int a[] = {7,6,5,4,3,2,1};

int main() {
    int i;
    for(i=-1;i <= (ARRAY_NUMBERS-2);i++)
```

```
                printf("%d ",a[i+1]);
        return 0;
    }
```

(a) 7 6 5 4 3 2 (b) Linker error (MACRO) (c) outputs nothing (d) compiler error

34. Which of the following statements is correct ?

1) Changing reference in c++ changes the referent
2) It is possible to create array of reference

(a) 1 (b) 2 (c) none (d) both

35. What will be the output of below program:

```
int main(){
    int i;
    enum month {JAN,FEB,MAR,APR,MAY,JUN,JUL,AUG,SEP,OCT,DEC};
    for (i = JAN; i <= DEC; i++)
        cout << i;
    return 0;
}
```

(a) 123456789101112 (b) 012345678910 (c)0123456789 (d)1234567891012

36. By default any real number is treated as

(a) float (b) double (c) long double
(d) depends on the memory model that you are using

37. What will be the output of below program ?

```
void main(){
    char *str[] = { “Frogs”, “Do”, “Not”, “They”, “Croak!”};
    printf(“%d %d”, sizeof(str), sizeof(str[0]));
}
```

(a) 20 4 (b) 25 6 (c) 10 2 (d) 5 1

38. What should XXX ?

```
if( a && ( a & ( a - 1 ) ) == 0 ) {
        printf( XXX );
    }
```

(a) “a is power of 2 (b) “a is odd number”
(c) “a is prime number” (d) none of above

39. What XYZ function really does ?

```
bool XYZ(string a, string b){
    return ((a.length()==b.length()) && ((a+a).find(b) != -1));
}
```

(a) Check whether b is permutation of a (b) Check whether b is a rotation of a
(c) Check whether b is subset of a (d) a and b both are true

40. The output of the following program is

```
static int x[]= {1,2,3,4,5,6,7,8};
int i;
for(i=2; i<6;++i){
        printf("%d %d\n",x[i],x[x[i]]);
        x[x[i]] = x[i];
}
for(i=0; i<8; i++)
        printf("%d", x[i]);
```

(a) 1 2 3 3 5 5 7 8 (b) 1 2 3 4 5 6 7 8 (c) 8 7 6 5 4 3 2 1 (d) 1 2 3 5 4 6 7 8

41. What will be the output of below program:

```
union cool {
        int ival;
        float fval;
        char cval;
} u;
int main() {
        u.cval = 'A';
        switch(u.cval ) {
        case 'A' :
                printf("%c\n", u.cval);
        case 'B' :
                printf("%d\n", u.ival );
        default :
                printf("%f\n", u.fval);
        }
        return 0;
}
```

Answers

1	2	3	4	5	6
7	8	9	10	11	12
13	14	15	16	17	18
19	20	21	22	23	24
25	26	27	28	29	30
31	32	33	34	35	36
37	38	39	40	41	