C Mathematical Questions

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1) What is the output of this C code?

```
1.  #include <stdio.h>
2.  #include <math.h>
3.  int main()
4.  {
5.      int i = 90;
6.      printf("%f\n", sin(i));
7.      return 0;
8.  }
```

a) Compile time error
b) Undefined behaviour
c) 0.893997
d) 1.000000

2) What is the output of this C code?

```
1.  #include <stdio.h>
2.  #include <math.h>
3.  int main()
4.  {
5.      unsigned int i = -1;
6.      printf("%f\n", fabs(i));
7.      return 0;
8.  }
```

a) Compile time error
b) 1
c) -1
d) None of the mentioned

3)Function fabs defined math.h header file takes argument of type integer.

a) true
b) false

c) Depends on the implementation
d) Depends on the standard

4) log(x) function defined in math.h header file is

a) Natural base logarithm
b) Logarithm to the base 2
c) Logarithm to the base 10
d) None of the mentioned

5) What is the output of this C code?

```
1. #include <stdio.h>
2. #include <math.h>
3. int main()
4. {
5.     int i = 10;
6.     printf("%f\n", log10(i));
7.     return 0;
8. }
```

a) Compile time error
b) 1.000000
c) 2.302585
d) None of the mentioned

6) What types of inputs are accepted by mathematical functions?

a) short
b) int
c) float
d) double

Answer is d) double

7) In linux, apart from including math header file, the program is successfully executed by which of the following?

a) cc filename.c
b) cc filename.c -lc
c) cc -math filename.c
d) cc -lm filename.c

8) Which of the following is not a valid mathematical function?

a) frexp(x);
b) atan2(x,y);
c) srand(x);
d) fmod(x);

9) Which of the following mathematical function requires 2 parameter for successful function call?

a) fmod();
b) div();
c) atan2();
d) All of the mentioned.

10) Which mathematical function among the following does NOT require int parameters?

a) div(x, y);
b) srand(x);
c) sqrt(x);
d) All of the mentioned.

11) sin(x) returns

a) sine of x where x is in radians
b) sine of x where x is in degree
c) cosine of x where x is in radians
d) cosine of x where x is in degree

12) cos(x) returns

a) sine of x where x is in radians
b) sine of x where x is in degree
c) cosine of x where x is in radians
d) cosine of x where x is in degree

13) What is the output of this C code?

1. #include <stdio.h>
2. #include <math.h>
3. int main()

```
4.  {
5.      int k = pow(2, 3);
6.      printf("%d\n", k);
7.      return 0;
8.  }
```

a) 9
b) 8
c) -1
d) 6

14) What is the output of this C code?

```
1.  #include <stdio.h>
2.  #include <math.h>
3.  void main()
4.  {
5.      int k = fabs(-87);
6.      printf("%d\n", k);
7.      return 0;
8.  }
```

a) -87
b) 87
c) 78
d) error

15) What is the output of this C code?

```
1.  #include <stdio.h>
2.  #include <math.h>
3.  int main()
4.  {
5.      int k = sqrt(-4);
```

```
6.      printf("%d\n", k);
7.      return 0;
8.  }
```

a) -2
b) 2
c) Compile time error
d) NaN

16) Which among the following mathematical function do not have a “double” return-type?

a) srand(x);
b) ceil(x);
c) floor(x);
d) Both (b) and (c);

References:

1)http://www.sanfoundry.com/c-interview-questions-answers/