

## CSCI 1320 Mid-Term Exam I -- Key

### Multiple Choices

Identify the letter of the choice that best completes the statement or answers the question.

1. The tool used by a programmer to convert a high-level source program to an object module is a \_\_\_\_\_. **A**
  - a. compiler
  - b. source code
  - c. linker
  - d. preprocessor
  - e. text editor
2. How many bytes are usually there in the type *double*? **B**
  - a. 4
  - b. 8
  - c. 16
  - d. 32
  - e. 64
3. Which of the following is an *invalid* initialization? **A**
  - a. `char code = "b" ;`
  - b. `int i = 14;`
  - c. `long int i = 1000000000;`
  - d. `float payrate = 14.25;`
  - e. `double pi = 3.1415926536;`
4. Which of the following is a valid defined constant? **C**
  - a. `#define SALES-TAX-RATE = 0.0825`
  - b. `#define SALES-TAX-RATE 0.0825`
  - c. `#define SALES_TAX_RATE 0.0825`
  - d. `#define SALES_TAX_RATE 0.0825 ;`
  - e. None of the above
5. Which of the following output formatting statements would print the following results? **C**

23 z 4.100000

  - a. `printf ("%d%c%f", 23, z, 4.1) ;`
  - b. `printf ("%i%c%f", 23, 'z', 4.1);`
  - c. `printf ("%d %c %f", 23, 'z', 4.1);`
  - d. `printf ("%i %z %f", 23, z, 4.1);`
  - e. `printf ("%d %c %x", 23, z, 4.1);`
6. Given the following code, what is printed? **A/B/D**

```
int x;  
x = 4 ;  
printf ("%d" , x++) ;
```

  - a. 4
  - b. 4
  - c. 5
  - d. 4
  - e. undeterminable

7. Which of the following is not a valid assignment expression? **E**
- `a = b`
  - `a * = b`
  - `a = b + 1`
  - `a = b = 0`
  - `a + b = c`
8. Given `a` is 3, `b` is 4, and `c` is 5, what is the value of the expression **A**
- $$a * 4 + b / 2 - c * b?$$
- 6
  - 9
  - 14
  - 15
  - undeterminable (`b` is evaluated twice)
9. Which of the following set of statements does *NOT* print the same thing as the others? **E**
- `printf("Hello, World!\n");`
  - `printf("Hello, ");`  
`printf("World!\n");`
  - `printf("%s %s", "Hello,", "World!\n");`
  - `printf("%s%s", "Hello, ", "World!\n");`
  - `printf("Hello, %d\n", "World!");`
10. What is the data type of the following expression, assuming `int i; unsigned u;` **D**
- $$u*3.0 - i$$
- `char`
  - `int`
  - `unsigned int`
  - `double`
  - None of above
11. Which of the following statements reads the integer value 6 into the integer variable `c`? **E**
- `scanf("%c", 6);`
  - `scanf("%d", c);`
  - `scanf("%i", &c);`
  - `scanf("%c", &c);`
  - None of above
12. Which of the following is a valid identifier? **A**
- `_abc`
  - `23c`
  - `a#f`
  - `a-f`
  - `!a4`

13. What is the value of integer a after the following statement is executed? **C**

a = 7/3;

- a. 2.333333
- b. 2.333
- c. 2
- d. 1
- e. 0

14. Which format is used in scanf to read a double? **C**

- a. %c
- b. %f
- c. %lf
- d. %s
- e. %d

15. A good coding style has which of the following qualities? **E**

- a. It includes effective use of white-space
- b. It is easy to read
- c. It includes proper use of indentation
- d. It uses comments in the program where they will help make it more understandable
- e. All of above

16. Which of the following commands will redirect the output of the executable a.out to the file outputfile? **B**

- a. outputfile < a.out
- b. a.out > outputfile
- c. outputfile > a.out
- d. a.out < outputfile
- e. a.out → outputfile

17. Which of the following is **NOT** a legal character constant? **A**

- a. 'aa'
- b. 'b'
- c. '0'
- d. '\n'
- e. '9'

18. Which of the following is a legal string? **B**

- a. /\* "Hello World!" \*/
- b. ""
- c. // "Hello  
World!"
- d. "Hello World /\* " \*/
- e. /\* " \*/ Hello World"

19. Which of the following statements are equivalent? **A**

- i:  $a = a + b$ ;      ii:  $a += b$ ;      iii:  $a + b = a$ ;
- a. i and ii
  - b. i and iii
  - c. ii and iii
  - d. All three are equivalent
  - e. None are equivalent

20. The ++ operator is: **C**

- i:      A unary prefix operator      ii: A binary prefix operator  
iii:    A unary postfix operator     iv: A binary postfix operator
- a. i and ii
  - b. iii and iv
  - c. i and iii
  - d. ii and iv
  - e. ii and iii

21. Which of the following is **NOT** an assignment operator? **B**

- a. +=
- b. ==
- c. /=
- d. %=
- e. =

22. What is the value of the integer a after the statement, given  $a = 1$ ,  $b = 2$  and  $d = 4$ : **D**

$a = ++a * b - d++$ ;

- a. The statement does not compile, so it cannot have a value
- b. -4
- c. -1
- d. 0
- e. -3

23. Which of the following is **NOT** correct? **B**

- a. All variables should be declared.
- b. A program can have more than one `main()` function.
- c. A program may include predefined functions.
- d. The `scanf` function is defined in `stdio.h`.
- e. None of above

24. What is the output of the following program? **B**

```
#include <stdio.h>

int main(void)
{
    char a='A';
    printf("%d", a);
    return 0;
}
```

- a. A
- b. 65
- c. 97
- d. Compile error
- e. None of above

25. What is the output of the following program? **D**

```
#include <stdio.h>

int main(void)
{
    printf("\tHello!\n");
    return 0;
}
```

- a. Hello!
- b. Hello!
- c. \tHello!
- d. Hello!\n
- e. Hello!/n

26. Which of the following can **NOT** be inside the `main()` function? **E**

- a. `scanf`
- b. `printf`
- c. `#define PI "I like apple."`
- d. variable declaration
- e. None of above

27. Which of the following is correct? **E**

- a. `#define PI = 3.14;`
- b. `#include stdio.h`
- c. `int a=1, b=2, c=3; a+b = c;`
- d. `int num; scanf("%d", num);`
- e. None of above

28. The following is the conversion character and corresponding argument. Which is **NOT** true?

**B**

- a. c - character
- b. i - integer
- c. f - floating-point number
- d. lf - double precision
- e. None of above

29. Using the following code, the output was a=6.233. Which printf was used? **B**

```
float a; a=6.233454;
```

- a. printf("a=%1d", a);
- b. printf("a=%5.3f", a);
- c. printf("a=%4.3f", a);
- d. printf("a=%1.3f", a);
- e. printf("a=%1f", a);

30. A variable X is defined as character (like char X). Which of the following can be assigned to X? **A**

- a. 'a'
- b. "a"
- c. 'abc'
- d. "abc"
- e. None of above