

Sample exam papers

Introduction to Program Development UFCE46-20-1

Answer ALL questions in this paper

Each question is worth 2 marks

Select the best option for the following questions

1. Proper program indentation is important because:

- A. it enables human readability
- B. it enables iteration and selection
- C. it encourages correct variable naming
- D. it prevents logic errors

2. Given :

```
int upper=0;  
double lower=0;
```

which Java code segment contains a syntax error:

- A. upper = upper;
- B. lower = upper;
- C. lower = lower;
- D. upper= lower;

3. What exists after the following Java statements?

```
Date now = new Date();  
Date later = new Date();
```

- A. two objects
- B. two classes
- C. two functions
- D. two scalars

4. **A method that returns a value must contain the following keyword:**

- A. void
- B. return
- C. public
- D. break

5. **Consider the following Java switch statement. If the integer variable `number` has the value 98 what output is produced by the switch statement?**

```
switch(number) {  
    case 99 : System.out.print("99");  
        break;  
    case -1 : System.out.print("<99");  
        break;  
    default : System.out.print("Not valid");  
}
```

- A. -1
- B. <99
- C. 99<99Not valid
- D. Not valid

6. **In Java, `boolean` is which type :**

- A. scalar
- B. verbose
- C. volatile
- D. reference

7. **An array is best described as :**

- A. a garbage collection algorithm
- B. a simple variable
- C. a collection of data items of the same type
- D. data items of different types stored in the same memory location

8. **Which statement is most true for this UML entry:**

```
+ checkPrice(int, int) : double
```

- A. the method must return a datatype double
- B. the method must have a variable called price
- C. the method must not be declared public
- D. no more than two integers must be passed to the method

9. **Which word is a visibility modifier**

- A. public
 - B. final
 - C. void
 - D. static
-

10. **A class variable is defined by which keyword?**

- A. static
 - B. extends
 - C. formal
 - D. final
-

11. **Which answer is most accurate. An `if` statement :**

- A. contains an `else` clause
 - B. allows a choice of statements to be executed
 - C. may iterate multiple times
 - D. should end with a `break` statement
-

12. **Which answer is most accurate. An `else` statement :**

- A. contains an `else` clause
 - B. should end with a `break` statement
 - C. may iterate multiple times
 - D. allows a choice of statements to be executed
-

13. **UML stands for**

- A. Uniform Method Locator
 - B. Unified Modeling Language
 - C. User Modifier Library
 - D. Unit Method Listing
-

14. **Which is not an equality or relational operator?**

- A. %
- B. !
- C. |
- D. &

15. Which statement is true of an integer variable `number` with a value between 30 and 40 (inclusive).

- A. `if ((number >= 30) || (number <= 40))`
 - B. `if ((number <= 30) && (number >= 40))`
 - C. `if ((number <= 30) || (number <= 40))`
 - D. `if ((number >= 30) && (number <= 40))`
-

16. Which is the correct statement :

- A. `for (int i=0, i<10, i++)`
 - B. `for (int i=0; i<10; i++)`
 - C. `for (int i=0 % i<10 % i++)`
 - D. `for (int i=0: i<10: i++)`
-

17. Which statement is false? UML can be used to ...

- A. represent Java classes
 - B. debug method logic
 - C. show method return types
 - D. list required attributes
-

18. Given this code line: `public void setName(String name)` then `name` is :

- A. an actual parameter
 - B. a formal parameter
 - C. an optional variable
 - D. a scalar variable
-

19. What is this statement describing? The process of modifying the definition of an inherited method

- A. abstract method
 - B. static method
 - C. overriding
 - D. UML class diagram
-

20. Which of these is a fundamental development activity for object oriented programming?

- A. marketing
- B. testing
- C. compiling
- D. funding

21. **To return two integers from a method, one could:**

- A. return an object containing two integers
 - B. use two local variables
 - C. any of the above
 - D. use two parameters
-

22. **Given this code line: `aPerson.setName(name)` ; , name is :**

- A. a formal parameter
 - B. an actual parameter
 - C. an optional variable
 - D. a scalar variable
-

23. **The keyword `static` , when used within a method definition, indicates that the method**

- A. requires an object to be invoked
 - B. does not require an object to be invoked
 - C. is not valid
 - D. cannot be invoked
-

24. **Which of these is a method of the `java.util.Scanner` class?**

- A. `getNext()`
 - B. `hasNext()`
 - C. `setNext()`
 - D. `readNext()`
-

25. **Which of the following is a Java statement that declares a variable of a primitive type?**

- A. `double weight;`
 - B. `Rectangle house = new Rectangle();`
 - C. `primitive height;`
 - D. `Rectangle house;`
-

26. **Which option is an overloaded version of this method definition?**

+ `changeGear(int) : double`

- A. `+ changeGear(int, int, int, int) : double`
- B. `+ setGear(int) : double`
- C. `+ putGear(int) : double`
- D. `+ changegear(int) : double`

27. **Which of these is a Java modifier?**

- A. void
 - B. String
 - C. args
 - D. static
-

28. **Given this code fragment:**

```
for (int i=10; i>=10; i=i-3) {  
    System.out.println(i);  
}
```

What is the last value printed out?

- A. 1
 - B. 10
 - C. -2
 - D. 0
-

29. **Which of the following values can be stored in a Java boolean variable?**

- A. static
 - B. 0
 - C. false
 - D. new
-

30. **Regression testing is when you:**

- A. use a black box
 - B. rely on a debugger
 - C. re-run previous test
 - D. respond quickly to user feedback
-

31. **Which of these is a Java reserved word?**

- A. args
 - B. void
 - C. main
 - D. String
-

32. **An actual parameter is ...**

- A. an identifier that serves as a name in a method definition
- B. a variable which holds a scalar value
- C. the number of variables a method can accept
- D. the value passed to a method

33. **Object oriented programming REQUIREMENTS do not include which of these?**

- A. class relationships
 - B. GUI
 - C. execution speeds
 - D. output format
-

34. **Which method declaration does this UML class diagram entry describe: -**

`fillDetails(int, String, int) : double`

- A. `private fillDetails(int int1, String name, int int2) return double`
 - B. `private fillDetails(int int1, String name, int int2) return double`
 - C. `private double fillDetails(int integer, String aString, int t)`
 - D. `private (double) fillDetails(int integer, String aString, int integer2)`
-

35. **The Java arithmetic expression `21 % 5 + 3` evaluates to**

- A. `21 % 5 + 3`
 - B. 4
 - C. 7.2
 - D. 5
-

36. **If a method is overloaded, it means that the method :**

- A. is syntactically too complicated
 - B. is logically too complicated
 - C. has different versions depending on the number and type of the parameters
 - D. requires an object to be invoked
-

37. **The Java arithmetic expression `99.0 / (3 + 2)` evaluates to**

- A. 19
 - B. 5
 - C. 19.8
 - D. 4
-

38. **The Java statement `teeth++`; is equivalent to the Java statement**

- A. `+teeth;`
- B. `teeth= teeth+ 1 + 1;`
- C. `--teeth`
- D. `teeth= teeth+ 1;`

39. Consider the following Java switch statement. If the integer variable `number` has the value 9 what output is produced by the switch statement?

```
switch(number) {  
    case 99 : System.out.print("99");  
        break;  
    case -1 : System.out.print("<99");  
        break;  
    default : System.out.print("Not valid");  
}
```

- A. Not valid
 - B. <99
 - C. <99Not valid
 - D. 99<99
-

40. The Java compiler determines which type of errors

- A. syntax
 - B. runtime
 - C. object
 - D. logic
-

41. Which is the valid statement?

- A. `Scanner reader = new Scanner()`
 - B. `Scanner reader = new Scanner(System.in)`
 - C. `Scanner scan = new Scanner()`
 - D. `Scanner reader = new Scanner(System.out.println())`
-

42. Which of these is not a Java reserved word?

- A. public
- B. static
- C. String
- D. void

43. **What is the output of the following code segment?**

```
int store = 10;
int building = 8;
int value;

if (store < building)
    value = store;
else if (store > building)
    value = building;
else
    value = 0;

System.out.println(value);
```

- A. 10
- B. 0
- C. 8
- D. 18

44. **Which would be a poor constructor for a Person class?**

- A. `public Person(int anAge) { anAge= age; }`
- B. `public Person() { }`
- C. `public Person(String aName) { name = aName; }`
- D. `public Person(int anAge) { age = anAge; }`

45. **Assuming that Java conventions are followed, what is `display` here?**

```
Graph.display(x, y);
```

- A. a variable
- B. an object
- C. an instance method
- D. a static method

46. **Which of these is not a method of the `java.util.Scanner` class?**

- A. `nextBoolean()`
- B. `nextDouble()`
- C. `nextLine()`
- D. `nextInteger()`

47. Which statement can be used to loop over the decades of the 20th century (i.e. 1900, 1910, ..., 1990)?

- A. `for (int year = 1990; year <= 1990; year++)`
- B. `for (int year = 1990; year < 2000; year++)`
- C. `for (int year = 1990; year <= 1990; year+10)`
- D. `for (int year = 1990; year <= 1990; year=year + 10)`

48. Which of these is a valid constructor definition for a class called `UserInput`

- A. `+ newUserInput (Scanner)`
- B. `+ new (UserInput (Scanner))`
- C. `+ UserInput (Scanner)`
- D. `+ UserInput (Scanner) : String`

49. Given this code fragment:

```
for (int i=10; i>=0; i=i-3) {  
    System.out.println(i);  
}
```

What is the last value printed out?

- A. 10
- B. 0
- C. 1
- D. -2

50. A file containing Java code has the header: `public class Question` The file in which the source code must be stored is :

- A. `Question.class`
- B. `Program.java`
- C. `Question.java`
- D. `classQuestion.java`