

COMPUTER PROGRAMMING CONCEPTS (390)

—OPEN EVENT—

REGIONAL – 2019

DO NOT WRITE ON TEST BOOKLET

TOTAL POINTS _____ (*100 points*)

Failure to adhere to any of the following rules will result in disqualification:

- 1. Contestant must hand in this test booklet and all printouts. Failure to do so will result in disqualification.**
- 2. No equipment, supplies, or materials other than those specified for this event are allowed in the testing area. No previous BPA tests and/or sample tests or facsimile (handwritten, photocopied, or keyed) are allowed in the testing area.**
- 3. Electronic devices will be monitored according to ACT standards.**

No more than sixty (60) minutes testing time

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Workplace Skills Assessment Program competition.

MULTIPLE CHOICE

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

1. A terminating node in a flowchart is represented by which shape?
 - a. Rectangle
 - b. Parallelogram
 - c. Oval
 - d. Diamond

2. A void function will return _____.
 - a. a void data type
 - b. a string data type
 - c. nothing
 - d. an integer data type

3. What symbol is used to represent a decision in a flowchart?
 - a. Diamond
 - b. Circle
 - c. Triangle
 - d. Square

4. What is the unique name of a Web document that a browser needs to find and display?
 - a. Website
 - b. HTML
 - c. URL
 - d. WWW

5. What is the purpose of writing a program?
 - a. Make a game
 - b. Solve a problem
 - c. Make a calculator
 - d. Communicate with a friend

6. What is used to help the people who read code understand what the programmer had in mind?
 - a. Identifiers
 - b. Syntax
 - c. Comments
 - d. Addresses

7. What is a software tool that loads and formats Web documents for viewing?
 - a. Text Editor
 - b. Browser
 - c. IDE
 - d. Compiler

8. Which of the following is the *first* step in problem solving?
 - a. Designing a solution
 - b. Testing the solution
 - c. Implementing the solution
 - d. Understanding the problem

9. What are identifiers/words that have a special meaning in a programming language and can only be used in predefined ways?
 - a. Reserved words
 - b. Syntax
 - c. Comments
 - d. String Literals

10. What type of space can make a program easier to read and understand?
 - a. Namespace
 - b. White Space
 - c. Web Space
 - d. Black Space

11. Working with a _____ language lets the programmer ignore the details of machine language.
 - a. low-level
 - b. machine
 - c. high-level
 - d. assembled-level

12. What is a program that translates code in one language to code in another language all at once?
 - a. Interpreter
 - b. Translator
 - c. Executor
 - d. Compiler

13. What is a program that translates code in one language to code in another language one statement at a time?
 - a. Interpreter
 - b. Translator
 - c. Executor
 - d. Compiler

14. The _____ rules of a programming language dictate the form of a program.
 - a. semantics
 - b. syntax
 - c. spelling
 - d. punctuation

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15. The _____ dictate the meaning of the program statements.
- semantics
 - syntax
 - spelling
 - punctuation
16. Computers carry out lists of instructions called _____.
- bytecode
 - programs
 - networks
 - applets
17. Which of the following is *not* an example of a loop?
- For
 - Do While
 - If Else
 - While
18. Define I/O.
- Interdependent Operations
 - Interactive Operations
 - Independent Operations
 - Input and Output
19. Who is considered to be the first computer programmer?
- Bill Gates
 - Tim Berners-Lee
 - Ada Lovelace
 - Alan Turing
20. What language consists of 1s and 0s?
- Java
 - Visual Basic
 - C++
 - Binary
21. Which of the following could be a machine language instruction?
- goto 200
 - printf("hello")
 - mov ax, 0002
 - 011001 101100 001010 011010 111000 111000
22. When one sequence structure is placed inside another sequence structure, it is called a(n) _____ structure.
- internal
 - case
 - nested
 - joined

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23. A _____ is a single item of information about a person, place or thing.
- database
 - record
 - key
 - field
24. A _____ variable is visible to all parts of a program.
- local
 - global
 - hidden
 - temporary
25. A _____ variable is only visible in the function or subroutine where it is defined.
- local
 - global
 - hidden
 - temporary
26. What is the value of x immediately after the following code is executed?
- ```
int x = 5
x = x / 6
```
- 1
  - 5
  - 3
  - 0
27. Which problem domain might contain the objects (orders, specials, supplier contacts)?
- building a home
  - managing a restaurant
  - packing a suitcase
  - writing a paper
28. What does OOP stand for?
- Objective Object Programming
  - Optional Object Programming
  - Obtuse Oriented Programming
  - Object Oriented Programming
29. Even though it is a supported statement, using it produces 'spaghetti' code. Which statement is being referred to?
- end
  - goto
  - exit
  - break

30. What is the name of the program structure in which a block of statements are repeated?
- Selection
  - Sequence
  - Iterative
  - Infinite
31. What is the name of the program structure where you perform an action or task and then you perform the next action or task in order?
- Selection
  - Sequence
  - Iterative
  - Infinite
32. What is the name of the program structure where you perform an action or task and then you make a decision of which action or task to perform next?
- Selection
  - Sequence
  - Iterative
  - Infinite
33. What are sequences of characters that make up a word or sentence called?
- Variable
  - String
  - Constant
  - Primitive
34. Memory locations whose values can change as the program is running are called?
- Primitive
  - Global
  - Constant
  - Variable
35. At least one of the conditions connected by the \_\_\_\_\_ operator must be true for the compound conditional to be true.
- AND
  - NOT
  - OR
  - Both A and B
36. What symbol is used to represent output in a flowchart?
- Square
  - Parallelogram
  - Circle
  - Triangle

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37. Computer Programmers often refer to a memory address using \_\_\_\_\_ notation or base
- indirect
  - binary
  - mathematical
  - hexadecimal
38. Which of the following is true of naming variables?
- Variable names can have spaces
  - Variable names can begin with numbers
  - Variable names may contain an underscore
  - Variable names may also be language keywords
39. When a loop control variable is *not* altered during loop execution, a(n) \_\_\_\_\_ loop may result.
- enlarged
  - broken
  - infinite
  - default
40. People who use computer programs are called \_\_\_\_\_?
- stakeholders
  - end users
  - programmers
  - managers
41. In a \_\_\_\_\_ program, the user sees a screen and can typically make selections using a mouse or other pointing device.
- modular
  - GUI
  - reusable
  - command-line
42. Desk-checking is also called \_\_\_\_\_.
- prototyping
  - beta checking
  - alpha checking
  - hand-tracing
43. A post-test loop will always \_\_\_\_\_
- execute the code block at least twice
  - execute the code block at least once
  - run until its counter reaches zero
  - run until its counter becomes a negative value

44. Some programming languages do not allow you to divide \_\_\_\_\_
- floating-point numbers
  - by 1
  - an integer by a floating-point number
  - by zero
45. Operators that have two operands are called \_\_\_\_\_
- unary operators
  - binary operators
  - operators
  - expressions
46. \_\_\_\_\_ is the process where the compiler temporarily changes a variable's data type to perform a calculation.
- Typecasting
  - Advancement
  - Adaption
  - Promotion
47. A program with a(n) \_\_\_\_\_ never ends.
- decision symbol
  - nonterminated condition
  - variable
  - infinite loop
48. An overflow condition occurs when \_\_\_\_\_
- a value is too large for its data type
  - a decimal value is stored into an integer field
  - too many variables are defined in one program
  - an integer is divided by a floating-point number
49. Infinite loops are examples of \_\_\_\_\_ errors.
- logic
  - run-time
  - syntax
  - none of the above
50. Which type of build message occurs when you declare a variable but don't use it in your program?
- syntax error message
  - compiler error message
  - warning message
  - logic error message