

1. A vector processor is an example of a _____ computer.
 - a. single instruction, single data stream (SISD)
 - b. multiple instruction, multiple data stream (MIMD)
 - c. single instruction, multiple data stream (SIMD)
 - d. multiple instruction, single data stream (MISD)

2. Prolog's order of evaluation is:
 - a. left to right, depth first.
 - b. right to left, depth first.
 - c. left to right, breadth first.
 - d. right to left, breadth first.

3. A data structure consisting of an integer variable and a queue of task descriptors is called a semaphore.
 - a. True
 - b. False

4. In Prolog, instantiation:
 - a. binds a value to a variable.
 - b. binds a type to a variable.
 - c. computes an inferred proposition from given propositions.
 - d. a and b.
 - e. a and c.
 - f. b and c.
 - g. all of the above.

5. A monitor:
 1. shared data is resident in the monitor rather than clients.
 2. provides synchronization without semaphores.
 3. provides cooperation synchronization.
 - a. 1 and 2
 - b. 1 and 3
 - c. 2 and 3
 - d. 1, 2, and 3
6. In C++, exceptions are raised by the _____ expression.
 - a. raise
 - b. try
 - c. when
 - d. throw
7. All of the following are advantages of exception handling *except*:
 - a. eliminates code clutter resulting from error-checking.
 - b. enables error propagation to specialized routines.
 - c. provides the means for avoiding logic errors.
 - d. encourages programmers to consider all of the events that could occur and plan for handling them.
8. In the event a Java Virtual Machine runs out of heap memory, an exception is thrown by the Error class that should be handled by the programmer.
 - a. True
 - b. False
9. Programs that have coroutines have _____ of control.
 - a. a single thread
 - b. multiple threads
 - c. virtual multiple threads
 - d. physical multiple threads
10. In Ada, the block or unit that raises an exception is continued or resumed.
 - a. True
 - b. False

11. The simplest choice for handling an exception is:
- continue execution at the next block of code.
 - continue execution at the next statement.
 - terminate the program.
 - none of the above.
12. When an exception occurs in an Ada procedure, either in the elaboration of its declaration or execution of its body, the exception:
- is implicitly propagated to the calling program unit at the point of the procedure call.
 - may be traced back through its static ancestors, at the programmer's option.
 - may be traced back through its dynamic ancestors, at the programmer's option.
- 1
 - 2
 - 3
 - 1 and 2
 - 1 and 3
 - 2 and 3
 - All of the above.
13. In logic programming, the right side of a _____ form proposition is called the _____.
- sentential; consequent
 - clausal; consequent
 - sentential; antecedent
 - clausal; antecedent
14. If a computer has more than one processor, several program units from the same program may execute simultaneously. This type of concurrency is termed:
- virtual.
 - literal.
 - physical.
 - logical.

15. Using Scheme, LET creates a new local dynamic scope in much the same way as Ada's declare.
- True
 - False
16. A binary semaphore is a semaphore that has a queue of binary variables.
- True
 - False
17. In logic programming, the inference rule that allows inferred propositions to be computed from given propositions is called:
- unification.
 - resolution.
 - instantiation.
 - evaluation.
18. Scheme predicate functions return a Boolean value of either True or False.
- True
 - False
19. Consider the following Scheme function:

```
(DEFINE (mystery lis1 lis2)
  (COND
    ((NULL? lis1) (NULL? lis2))
    ((NULL? lis2) '())
    ((EQ? CAR lis1) (CAR lis2))
    (mystery (CDR lis1) (CDR lis2)))
  (ELSE '()))
))
```

The third COND case is:

- recursive.
- iterative.
- a function itself.
- none of the above.

20. The mystery function in the above question:
- sorts a list.
 - sorts the second list in the same order as the first.
 - reverses two lists.
 - compares two lists for equality.
21. Programming languages based on symbolic logic are called:
- imperative.
 - functional.
 - declarative.
 - mathematical.
22. The developers of LISP identified and included specifications for dynamic scoping.
- True
 - False
23. Using Scheme, (EQ? '(A B) '(A B)) returns:
- #T
 - #F
 - ()
 - a or b
 - a or c
 - b or c
24. Propositions in a logic programming language can be stated in two distinct modes:
- one to define a proposition as true and one in which the truth of the proposition is yet to be determined.
 - one to define a proposition as true and one to define a proposition as false.
 - one to define a proposition as true or false, and one in which the truth of the proposition is yet to be determined.
 - none of the above.
25. In Prolog, the right-hand side of a statement is analogous to the “*then*” part of an “*if..then*” statement in an imperative language.
- True
 - False