**Midterm Exam**

**Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Strand & Section: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Score: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Choose the correct answer.**

1. In LISP, the function returns the list that results after the first element is removed (the rest f the list), is \_\_\_\_\_\_\_\_\_\_ **D**  
   a) car  
   b) last  
   c) cons  
   d) cdr
2. Which of the following contains the output segments of Artificial Intelligence programming? **D**  
   a) Printed language and synthesized speech  
   b) Manipulation of physical object  
   c) Locomotion  
   d) All of the mentioned
3. LISP was created by? **A**  
   a) John McCarthy  
   b) Marvin Minsky  
   c) Alan Turing  
   d) Allen Newell and Herbert Simon
4. Expert Ease was developed under the direction of \_\_\_\_\_\_\_\_\_\_ **B**  
   a) John McCarthy  
   b) Donald Michie  
   c) Lofti Zadeh  
   d) Alan Turing
5. An Artificial Intelligence system developed by Terry A. Winograd to permit an interactive dialogue about a domain he called blocks-world. **A**  
   a) SHRDLU  
   b) SIMD  
   c) BACON  
   d) STUDENT
6. MLMenu, a natural language interface for the TI Explorer, is similar to \_\_\_\_\_\_\_\_\_\_ **B**  
   a) Ethernet  
   b) NaturalLink  
   c) PROLOG  
   d) The Personal Consultant
7. Strong Artificial Intelligence is \_\_\_\_\_\_\_\_\_\_ **A**  
   a) the embodiment of human intellectual capabilities within a computer  
   b) a set of computer programs that produce output that would be considered to reflect intelligence if it were generated by humans  
   c) the study of mental faculties through the use of mental models implemented on a computer  
   d) all of the mentioned
8. The traditional way to exit and LISP system is to enter \_\_\_\_\_\_\_\_\_\_ **B**  
   a) quit  
   b) exit  
   c) bye  
   d) ok
9. In which of the following situations might a blind search be acceptable? **C**  
   a) real-life situation  
   b) complex game  
   c) small search space  
   d) all of the mentioned
10. What is Artificial intelligence? **C**  
    a) Putting your intelligence into Computer  
    b) Programming with your own intelligence  
    c) Making a Machine intelligent  
    d) Playing a Game
11. Which search method takes less memory? **A**  
    a) Depth-First Search  
    b) Breadth-First search  
    c) Optimal search  
    d) Linear Search
12. A heuristic is a way of trying \_\_\_\_\_\_\_\_\_\_ **D**  
    a) To discover something or an idea embedded in a program  
    b) To search and measure how far a node in a search tree seems to be from a goal  
    c) To compare two nodes in a search tree to see if one is better than the other is  
    d) All of the mentioned
13. How do you represent “All dogs have tails”? **A**  
    a) ۷x: dog(x) àhastail(x)  
    b) ۷x: dog(x) àhastail(y)  
    c) ۷x: dog(y) àhastail(x)  
    d) ۷x: dog(x) àhasàtail(x)
14. Which is not a property of representation of knowledge? **A**  
    a) Representational Verification  
    b) Representational Adequacy  
    c) Inferential Adequacy  
    d) Inferential Efficiency
15. What is Machine learning? **A**  
    a) The autonomous acquisition of knowledge through the use of computer programs  
    b) The autonomous acquisition of knowledge through the use of manual programs  
    c) The selective acquisition of knowledge through the use of computer programs  
    d) The selective acquisition of knowledge through the use of manual programs
16. Which of the factors affect the performance of learner system does not include? **D**  
    a) Representation scheme used  
    b) Training scenario  
    c) Type of feedback  
    d) Good data structures
17. Different learning methods does not include? **D**  
    a) Memorization  
    b) Analogy  
    c) Deduction  
    d) Introduction
18. In language understanding, the levels of knowledge that does not include? **C**  
    a) Phonological  
    b) Syntactic  
    c) Empirical  
    d) Logical
19. A model of language consists of the categories which does not include? **D**  
    a) Language units  
    b) Role structure of units  
    c) System constraints  
    d) Structural units
20. What is a top-down parser? **A**  
    a) Begins by hypothesizing a sentence (the symbol S) and successively predicting lower level constituents until individual preterminal symbols are written  
    b) Begins by hypothesizing a sentence (the symbol S) and successively predicting upper level constituents until individual preterminal symbols are written  
    c) Begins by hypothesizing lower level constituents and successively predicting a sentence (the symbol S)  
    d) Begins by hypothesizing upper level constituents and successively predicting a sentence (the symbol S)
21. Among the following which is not a horn clause? **D**  
    a) p  
    b) Øp V q  
    c) p → q  
    d) p → Øq
22. The action ‘STACK(A, B)’ of a robot arm specify to \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ **D**  
    a) Place block B on Block A  
    b) Place blocks A, B on the table in that order  
    c) Place blocks B, A on the table in that order  
    d) Place block A on block B
23. What is a Cybernetics? **B**  
    a) Study of communication between two machines  
    b) Study of communication between human and machine  
    c) Study of communication between two humans  
    d) Study of Boolean values
24. What is the goal of artificial intelligence? **C**  
    a) To solve real-world problems  
    b) To solve artificial problems  
    c) To explain various sorts of intelligence  
    d) To extract scientific causes
25. An algorithm is complete if \_\_\_\_\_\_\_\_\_\_\_\_ **A**  
    a) It terminates with a solution when one exists  
    b) It starts with a solution  
    c) It does not terminate with a solution  
    d) It has a loop
26. Which is true regarding BFS (Breadth First Search)? **B**  
    a) BFS will get trapped exploring a single path  
    b) The entire tree so far been generated must be stored in BFS  
    c) BFS is not guaranteed to find a solution if exists  
    d) BFS is nothing but Binary First Search
27. What is a heuristic function? **D**  
    a) A function to solve mathematical problems  
    b) A function which takes parameters of type string and returns an integer value  
    c) A function whose return type is nothing  
    d) A function that maps from problem state descriptions to measures of desirability
28. The traveling salesman problem involves n cities with paths connecting the cities. The time taken for traversing through all the cities, without knowing in advance the length of a minimum tour, is \_\_\_\_\_\_\_\_\_\_\_ **C**  
    a) O(n)  
    b) O(n2)  
    c) O(n!)  
    d) O(n/2)
29. What is the problem space of means-end analysis? **A**  
    a) An initial state and one or more goal states  
    b) One or more initial states and one goal state  
    c) One or more initial states and one or more goal state  
    d) One initial state and one goal state
30. An algorithm A is admissible if \_\_\_\_\_\_\_\_\_\_\_ **B**  
    a) It is not guaranteed to return an optimal solution when one exists  
    b) It is guaranteed to return an optimal solution when one exists  
    c) It returns more solutions, but not an optimal one  
    d) It guarantees to return more optimal solutions
31. Knowledge may be **D**  
    I. Declarative.  
    II. Procedural.  
    III. Non-procedural.  
    a) Only (I)  
    b) Only (II)  
    c) Only (III)  
    d) Both (I) and (II)
32. Idempotency law is **A**  
    I. P Ú P = P.  
    II. P Ù P = P.  
    III. P + P = P.  
    a) Only (I)  
    b) Only (II)  
    c) Only (III)  
    d) Both (I) and (II)
33. When talking to a speech recognition program, the program divides each second of your speech into 100 separate \_\_\_\_\_\_\_\_\_\_ **C**  
    a) Codes  
    b) Phonemes  
    c) Samples  
    d) Words
34. Which term is used for describing the judgmental or commonsense part of problem solving? **A**  
    a) Heuristic  
    b) Critical  
    c) Value based  
    d) Analytical
35. Which stage of the manufacturing process has been described as “the mapping of function onto form”? **A**  
    a) Design  
    b) Distribution  
    c) Project management  
    d) Field service
36. Which kind of planning consists of successive representations of different levels of a plan? **A**  
    a) hierarchical planning  
    b) non-hierarchical planning  
    c) project planning  
    d) all of the mentioned
37. What was originally called the “imitation game” by its creator? **A**  
    a) The Turing Test  
    b) LISP  
    c) The Logic Theorist  
    d) Cybernetics
38. Decision support programs are designed to help managers make \_\_\_\_\_\_\_\_\_\_ **C**  
    a) budget projections  
    b) visual presentations  
    c) business decisions  
    d) vacation schedules
39. PROLOG is an AI programming language, which solves problems with a form of symbolic logic known as predicate calculus. It was developed in 1972 at the University of Marseilles by a team of specialists. Can you name the person who headed this team? **A**  
    a) Alain Colmerauer  
    b) Niklaus Wirth  
    c) Seymour Papert  
    d) John McCarthy
40. Programming a robot by physically moving it through the trajectory you want it to follow be called \_\_\_\_\_\_\_\_\_\_ **B**  
    a) contact sensing control  
    b) continuous-path control  
    c) robot vision control  
    d) pick-and-place control
41. To invoke the LISP system, you must enter \_\_\_\_\_\_\_\_\_\_ **B**  
    a) AI  
    b) LISP  
    c) CL (Common Lisp)  
    d) Both LISP and CL
42. In LISP, what is the function (list-length <list>)? **B**  
    a) returns a new list that is equal to &lt:list> by copying the top-level element of <list>  
    b) returns the length of <list>  
    c) returns t if <list> is empty  
    d) all of the mentioned
43. ART (Automatic Reasoning Tool) is designed to be used on \_\_\_\_\_\_\_\_\_\_ **A**  
    a) LISP machines  
    b) Personal computers  
    c) Microcomputers  
    d) All of the mentioned
44. Which particular generation of computers is associated with artificial intelligence? **C**  
    a) Second  
    b) Fourth  
    c) Fifth  
    d) Third
45. Shaping teaching techniques to fit the learning patterns of individual students is the goal of \_\_\_\_\_\_\_\_\_\_ **C**  
    a) decision support  
    b) automatic programming  
    c) intelligent computer-assisted instruction  
    d) expert systems
46. Which of the following function returns t If the object is a symbol m LISP? **B**  
    a) (\* <object>)  
    b) (symbolp <object>)  
    c) (nonnumeric <object>)  
    d) (constantp <object>)
47. The symbols used in describing the syntax of a programming language are \_\_\_\_\_\_\_\_\_\_ **D**  
    a) 0  
    b) {}  
    c) “”  
    d) <>
48. What is the primary interactive method of communication used by humans? **C**  
    a) reading  
    b) writing  
    c) speaking  
    d) all of the mentioned
49. Elementary linguistic units that are smaller than words are? **D**  
    a) allophones  
    b) phonemes  
    c) syllables  
    d) all of the mentioned
50. mouse device may be \_\_\_\_\_\_\_\_\_\_\_\_\_ **D**  
    a) electro-chemical  
    b) mechanical  
    c) optical  
    d) both mechanical and optical