1. An AI agent perceives and acts upon the environment using___.
    a. Sensors
    b. Perceiver
    c. Actuators
    d. Both a and c

Ans- d

2. Which search method takes less memory?

    a. Depth-First Search
    b. Breadth-First search
    c. Optimal search
    d. Linear Search

Ans- a

3. Which is used to improve the agents performance?
    a. Perceiving
    b. Learning
    c. Observing
    d. None of the mentioned

Ans-b

4. How many types of agents are there in artificial intelligence?
    a. One
    b. Two
    c. Three
    d. Four

Ans-c

5. An agent is composed of _____
    a. Architecture
    b. Agent Function

c. Perception Sequence

d. Architecture and Program

Ans-d

6. What is state space?

a. The whole problem

b. Your Definition to a problem

c. Problem you design

d. Representing your problem with variable and parameter

Ans-d

7. A problem in a search space is defined by one of these state

a. Initial state

b. Last state

c. Intermediate state

d. Successor state

Ans-a

8. The process of removing detail from a given state representation is called _____

a. Extraction

b. Abstraction

c. Information Retrieval

d. Mining of data

Ans-b

9. A production rule consists of _____

a. A set of Rule

b. A sequence of steps

c. Set of Rule & sequence of steps

d. Arbitrary representation to problem

Ans-c

10. Which search method takes less memory?

a. Depth-First Search

b. Breadth-First search
c. Linear Search
d. Optimal search

Ans-a

11. Which search strategy is also called as blind search?
a. Uninformed search
b. Informed search
c. Simple reflex search
d. Depth-limited search

Ans-a

12. Which search is implemented with an empty first-in-first-out queue?

a. Depth-first search
b. Breadth-first search
c. Unidirectional search
d. Bidirectional search

Ans-b

13. Which search algorithm imposes a fixed depth limit on nodes?
a. Depth-limited search
b. Depth-first search
c. Iterative deepening search
d. Bidirectional search

Ans-a

14. When will Hill-Climbing algorithm terminate?
a. Stopping criterion met
b. Global Min/Max is achieved
c. Local Min/Max is achieved
d. No neighbour has higher value

Ans-d

15. _____ algorithm keeps track of k states rather than just one.
    a. Hill-Climbing search
    b. Local Beam search
    c. Stochastic hill-climbing search
    d. Random restart hill-climbing search

Ans-b

16. A* algorithm is based on _____
    a. Breadth-First-Search
    b. Depth-First –Search
    c. Best-First-Search
    d. Hill climbing

Ans-c

17. To overcome the need to backtrack in constraint satisfaction problem can be eliminated by _____
    a. Forward Searching
    b. Constraint Propagation
    c. Backtrack after a forward search
    d. Omitting the constraints and focusing only on goals

Ans- a

18. What is the evaluation function in greedy approach?
    a. Heuristic function
    b. Path cost from start node to current node
    c. Path cost from start node to current node + Heuristic cost
    d. Average of Path cost from start node to current node and Heuristic cost

Ans-1

19. What is the general term of Blind searching?

a. Informed Search
b. Uninformed Search
c. Informed & Unformed Search
d. Informed & Unformed Search

Ans-b

20. Optimality of BFS is _____

a. When there is less number of nodes
b. When there is more number of nodes
c. When all step costs are equal
d. When all step costs are unequal

Ans-c

21. A heuristic is a way of trying

(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

(d) Only (a), (b) and (c).

Ans- d

22. Which statement is valid for the Heuristic function?

a. The heuristic function is used to solve mathematical problems.
b. The heuristic function takes parameters of type string and returns an integer value.
c. The heuristic function does not have any return type.
d. The heuristic function calculates the cost of an optimal path between the pair of states.

Ans-d

1. An AI agent perceives and acts upon the environment using___.
   a. Sensors
   b. Perceiver
   c. Actuators
   d. Both a and c

Ans- d

2. How do you represent "All dogs have tails".

(a) ∀x: dog(x)->hastail(x) (b) ∀x: dog(x) ->hastail(y)

(c) ∀x: dog(y) ->hastail(x) (d) ∀x: dog(x) ->hasàtail(x)

Ans- a

3. Which is not a property of representation of knowledge?

(a) Representational Verification (b) Representational Adequacy

(c) Inferential Adequacy (d) Inferential Efficiency

Ans-a

4. Which is not a Goal-based agent?

(a) Inference (b) Search

(c) Planning (d) Conclusion

Ans-d

5. Uncertainty arises in the wumpus world because the agent's sensors give only

(a) Full & Global information (b) Partial & Global Information

(c) Partial & local Information (d) Full & local information

Ans- c

6. What is true about rule based system?

A. The definitions of rule-based system depend almost entirely on expert systems.
B. A rule based system uses rules as the knowledge representation for knowledge coded into the system.
C. A rule-based system is a way of encoding a human expert's knowledge in a fair-ly narrow area into an automated system.
D. All of the above

Ans-D

7. Backward chaining rule is?

A. Goal driven
B. Data driven
C. Both A and B
D. None of the above
Ans- A

8. In a backward chaining system, we begin with some hypotheses, we are trying to prove the hypothesis, and try to find the rules that would allow us to determine that hypothesis, perhaps setting new sub-goals to prove as you go.

(A). True
(B). False
(C). Partially correct
(D). Incorrect
Ans-A

9. State space is…
a) Representing your problem with variable and parameter

b) Problem you design

c) Your Definition to a problem

d) The whole problem

ans- A

10. What will be returned by backward chaining AI Algorithm?

(A). Additional statements

(B). Logical statement

(C). Substitutes matching the query

(D). All of the mentioned

Answer: C

11. Which of the following is exact backward chaining algorithm

(A). Hill-climbing search AI Algorithm

(B). Breadth-first search AI Algorithm

(C). Depth-first search AI Algorithm

(D). All of the mentioned

Answer: C

12. which of the following can occur in backward chaining

(A). Repeated states

(B). Incompleteness

(C). Both A and B

(D). Complexity

Answer: C

13. What is the condition of variables in first-order literals?

(A). Universally quantified

(B). Existentially quantified

(C). Both A & B

(D). None of these

Answer: A

14. Which condition will stop the growth of the forwarding chaining approach?

(A). Atomic sentences

(B). No further inference

(C). Complex sentences

(D). All of these

Answer: B

15. Skolmization is the process of

a. bringing all the quantifiers in the beginning of a formula in FDL

b. removing all the universal quantifiers

c. removing all the existential quantifiers

d. all of the above

Ans- c

16. A cryptarithmetic problem of the type

SEND
+ MORE

MONEY

Can be solved efficiently using
a. depth first technique
b. breadth first technique
c. constraint satisfaction technique
d. bidirectional technique

ans- c

17. The objective of_____ procedure is to discover at least one_____that causes two literals to match.

a. unification, validation
b. unification, substitution
c. substitution, unification
d. minimax, maximum

ans- b

18. Match the following:

a. Script	i. Directed graph with labelled nodes for graphical representation of knowledge
b. Conceptual	ii. Knowledge about objects and events is stored in record-like structures consisting of slots and slot values.
c. Frames	iii. Primitive concepts and rules to represent natural language statements
d. Associative Network	iv. Frame like structures used to represent stereotypical patterns for commonly occurring events in terms of actors, roles, props and scenes

code:

a = ? , b = ? , c = ? , d = ?

a. iv ii i iii
b. iv iii ii i
c. ii iii iv i

d. i iii iv ii

ans- c

19. Match the following components of an expert system:

a. I/O interface	i. Accepts user's queries and responds to question through I/O interface
b. Explanation module	ii. Contains facts and rules about the domain
c. Inference engine	iii. Gives the user, the ability to follow inferencing steps at any time during consultation
d. Knowledge base	iv. Permits the user to communicate with the system in a natural way

code:

a = ? , b = ? , c = ? , d = ?

a. i iii iv ii

b. iv iii i ii

c. i iii ii iv

d. iv i iii ii

ans- d

20. STRIPS address the problem of _____

a. representation

b. implementation

c. navigation

d. a and b

ans- d

21. STRIPS is not related to _____

a. SHAKEY

b. SRI

c. NLP

d. None of these

ans- c

22. Each alphabet have a value between 0 to 9 in a cryptoarithmetic problem

CROSS+ROADS

DANGER

Which of the following statement is true ?

(i) No two alphabets can have the same numeric value.

(ii) Any two alphabets may have the same numeric value.

(iii) D = 0

(iv) D = 1

a. (i) and (iii)

b. (i) and (iv)

c. (ii) and (iii)

d. (ii) and (iv)

Ans- b

23. The map colouring problem can be solved using which of the following technique?

a. Means-end analysis

b. Constraint satisfaction

c. AO* search

d. Breadth first search

ans- b

24. _____ are mathematical problems defined as a set of objects whose state must satisfy a number of constraints or limitations.

a) Constraints Satisfaction Problems

b) Uninformed Search Problems

c) Local Search Problems

d) All of the mentioned

Ans- a

25. To get rid of backtracking in constraint satisfaction problem _____ is used

a) Forward Searching

b) Constraint Propagation

c) Backtrack after a forward search

d) Omitting the constraints and focusing only on goals

Ans- a