Sample Question paper

Artificial Intelligence

TYBSc I.T.

1. Human behavior is very subjective and cannot be prove mathematically.

a) Human
b) Problem solving Agent
c) Rational
d) Intelligent system

2. Automated reasoning unit is enable to analyze knowledge store in system and make new interference to answer the question.

a) Machine Learning
b) Automated reasoning
c) Natural language processing
d) Knowledge representation

3. Program remember the actions that has given desired output and discard the other trial actions and learn by itself is called as unsupervised learning.

a) Self learning
b) Supervised
c) Machine learning
d) Unsupervised

4. System like AC, fridge, washing machine are based on Fuzzy Logic.

a) Problem solving Agent
b) Robotics
c) Fuzzy logic
d) Machine learning

5. IN case of Reactiveness,an agent can perceive the environment and respond to situation in particular time frame.

a) Pro-activeness
b) Social ability
c) Reactiveness
d) Self governing

6. Multi body planning is strategy of implementing correct joint plan.

a) Co-operation
b) Multi body planning
c) Co-ordination mechanism

d) Competition

7. Semantic nets can be represent default values for categories which also can be overridden for a particular instances.

a) Efficient algorithm
b) Mental object
c) Mental events
d) Semantic net

8. Total order planning fails in non-co-operative environments.

a) Non-deterministic
b) Non-stochastics
c) Non-co-operative
d) Non-competitive

9. State space search is unfavorable for solving real world problem.

a) Depth first
b) State chart
c) Breath first
d) State space

10. In typical job shop scheduling problem, resource constraint have details about type of resources like bolts, wrenches or pilots.

a) Planning constraint
b) Amount constraint
c) Resource constraint
d) Problem solving constraint

11. Planning can be defined as :Planning= problem solving + Logical representation.

a) Planning= problem solving + Graphical representation.
b) Planning= Rationality + Logical representation.
c) Planning= problem solving + Logical representation.
d) Planning= Rationality + Graphical representation.

12. FOL symbol can be constant term, a variable term or function.

a) Data term
b) Rule
c) Variable term
d) Quantifier.

13. Unification algorithm is recursive algorithm.

a) Unification

b) Resolution
c) Lifting
d) Contradiction

14. Resolution is interference rule you need in order to build a sound and complete theorem proof maker.
a) Unification
b) Resolution
c) Lifting
d) Contradiction

15. Assembling the relevant knowledge of particular domain is called as process of knowledge acquisition.
a) Representation
b) Gathering
c) Assembling
d) Identifying

16. In first order logic, every condition is mapped to relation.
a) Condition
b) Ground term
c) Object
d) Link

17. There are two more levels above higher order logic which are multi valued and non monotonic logic level and they consist of modal logic and temporal logic.
a) Proposition
b) Multi valued
c) Fuzzy
d) First order

18. Natural language processing aims at the text or verbal output from machine or robot in the form of speech and written text respectively.
a) Problem solving
b) Knowledge Representation
c) Natural language processing
d) Reasoning

19. Environment changes while agent is taking action,hence next state of world does not merely depends on the current state and agent;s action so such type of environment is called as Stochastic.
a) Episodic
b) Stochastic

c) Unknown
d) Sequential

20. Applications of NLP are machine translation, information retrieval and text categorization.
a) Robotics
b) NLP
c) Fuzzy logic
d) Neural network

21. (0,0,0) is the goal test of Missionaries cannibal's problem.
a) 8 puzzle
b) River problem
c) Missionaries cannibals
d) Vacuum cleaner problem

22. All the strategies use evaluation function to select next state under the consideration, then it is called as informed search.
    a) Un informed
    b) Local beam
    c) Informed
    d) Genetic

23. Car driving agent is example of cooperative environment.
a) Cooperative
b) Discrete
c) Competitive
d) Stochastic

24. In the Go game, programs are such that human campions are beginning to be challenged by machines, through the best human still beat the best machines on the full board.
a) Chess
b) Go
c) Othello
d) Checkers

25. Links(Golden Gate bridge, SanFancisco, Marin Country) are the type of implementation level.
a) Knowledge
b) Physical
c) Implementation
d) Logical

26. In WUMPUS game, breeze experienced in the room which has pit in its neighborhood room.
a) Breeze
b) Pits
c) Stench
d) Arrows

27. Interference rule says that new sentences are created by logically following set of sentences of knowledge based.
a) Production
b) Semantic
c) Interference
d) Horn clause

28. Slots have name and values called as facets.
a) Forms
b) Clause
c) Facets
d) Frame

29. term1=term2 is true under a given interpretation if and only if term1 and term2 refer to same object.
a) term1-term2
b) term1*term2
c) term1=term2
d) term1€term2

30. Country Nano is enemy of America represented as forward chaining : Enemy(Nano,America).
a) Nano(Enemy,America)
b) (Nano,Enemy)America
c) Enemy(Nano,America)
d) America(Nano,Enemy)

31. Debug is the step in which one can prove or check the toughness of knowledgebase.
a) Encoding
b) Debug
c) Define vocabulary
d) Assemble knowledge

32. Problem of unification can be define as It given two atoms, to find if they unify, and if they do, return an most general unifier of them.
a) Least general unifier
b) Equal general unifier

c) Most general unifier
d) Unify general unifier

33. Data driven inference work from initial state.
a) Successor state
b) Final state
c) Current state
d) Initial state

34. Planning is the activity where agent has to come up with sequence of action to accomplish target.
a) Scheduling
b) Planning
c) Reasoning
d) Searching

35. While specifying the actions, we give details of duration,resource needed and consumables for that.
a) Problem solving approach
b) Sequence
c) Actions
d) Planning approach

36. If goal is absent from last level then goal cannot be achieved!
a) Absent
b) At end
c) Present
d) At start

37. Backward state space search is also called as regression planner.
a) Forward state space
b) Reverse state space
c) Directed state space
d) Backward state space

38. As per requirements the execution time ordering constraints are imposed on agent can be done by using partial planning method.
a) Total order panning
b) Regression
c) Partial order planning
d) Linear

39. ADL make use of open world assumption.
a) ADL

b) SRTIPS
c) ALD
d) STRIPS

40. Continuous planning persist over time and keep on planning on some predefined events.
a) Conditional
b) Execution monitoring and replanning
c) Sensorless
d) Continuous

41. In typical planning problem, we have set of pre-conditions which must be satisfied before we starts with actual action and there are effects of an action, these are pre-conditions and effects can be represented as operators.
a) Actions
b) Operators
c) Nodes
d) Pre-actions

42. Access the capabilities of our operators against the distribution of planning problem, and produce minimal sufficient set of operators definition for the use of planner can be done by publication module.
a) Calibration mechanism
b) Publication module
c) Explanation submodule
d) Casual module

43. Stochastic games are those in which uncertainty is observed in the result of action.
a) Probabilistic
b) Deterministic
c) Stochastics
d) Discrete

44. If it took years of development to be able to beat chess grandmaster ,and since then we have not been able to beat the machines at chess such type of specific task done by Narrow intelligence.
a) Strong AI
b) Narrow AI
c) Super AI
d) General AI

45. Rationality is depending on four criteria which are performance measures, agent's prior knowledge, action and agent's percept sequence to date.
a) Environment
b) Sensors

c) Performance measure
d) Logic

46. Road,traffic condition and clients are some environments of automated car driving agent.
a) Optimum speed
b) Clients
c) Safety
d) Profits

47. Utility based automatic car driving agent can be used to reach given location safely within least possible time and save fuel.
a) Goal
b) Model
c) Learning
d) Utility.

48. The feature in which intelligent agent has control over his own action is called as Self-governing.
a) Social ability
b) Self-learning
c) Self-governing
d) Pro-activeness.

49. Initial state, actions, successor function, goal test and path cost are the components of problem formulation.
a) Sequence
b) Performance measures
c) Environment
d) Successor function

50. Movement in left, right, up and down directions specifies the action of 8 puzzle problem.
a) 8 puzzle
b) River problem
c) Missionaries cannibals
d) Vacuum cleaner problem

51. DfS uses LIFO fringe i.e stack.
a) Queue
b) Stack
c) Linked list
d) Array

52. As the priority queue is maintained on the basis of total path cost of node, UCS algorithm never expand the node which has cost greater than cost of shorted path in the tree.

a) BFS
b) UCS
c) DLS
d) DFS

53. IDDFS algorithm is one which repeatedly applies depth limited search with increasing limit,it terminate when solution is found or if depth limited search returns failure.
   a) IDDFS
   b) UCS
   c) DLS
   d) BFS

54. A* algorithm will have f*(n)=g*(n)+h*(n)
   a) f*(n)=d*(n)+m*(n)
   b) f*(n)= g*(n)+h*(n)
   c) f*(n)=b*(n)+m*(n)
   d) f*(n)=h*(n)+d*(n)

55. It expand best leaf until memory is full. when there is no memory left to the add newly generated node, it need to drop one of the early expanded old node, SMA*always drop leaf node with highest f -cost.
a) Successor
b) Parent
c) Leaf
d) Child

56. Ridge is an area in hill such that it is higher than surrounding area, but there is no further uphill path from it.
a) Plateau
b) Ridge
c) Foothills
d) Local maxima

57. In parallel local beam search, the parallel threads communicate to each other.
a) Beams
b) Processes
c) Threads
d) Successors

58. The purpose of crossover operation is to allow genetic algorithm to create new chromosomes that share positive characteristics while simultaneously reducing prevalence of negative characteristics.
   a) Selection
   b) Crossover

c) Mutation
d) Reproduction

59. The basic techniques for genetic algorithm are design to simulate processes in natural system, necessary for evolution.
    a) Hill climbing
    b) Simulated annealing
    c) Local beam
    d) Genetic

60. Bidirectional search process terminate when search meet common node of the search tree.
    a) IDDFS
    b) Informed
    c) Un informed
    d) Bidirectional

61. All the agent jointly perform activities in order to achieve the same goal such type of environment is called as Cooperative environment.
a) Cooperative
b) Discrete
c) Competitive
d) Stochastic

62. If I has procedure that guarantees him at least A(x,y) amount on the average,and II has procedure that keep her average loss to at most A(x,y),then A(x,y) is called as value of game known as optimal strategy.
a) Equalizing
b) Optimal
c) Pure
d) Mixed

63. Time complexity of minmax algorithm is indicated as $O(b^m)$.
a) $O(b^n)$.
b) $O(b^{m-1})$.
c) $O(b^m)$.
d) $O(b^{n-1})$.

64. Ordering of good actions perform in α-β helps in improving the effectiveness of pruning technique.
a) Minmax
b) α-β
c) Game tree
d) Adversarial search

65. In the case of Othello game, the computerized games are so good that, human champions refuse to complete against computers.
a) Chess
b) Go
c) Othello
d) Checkers

66. Ontology specifies types of individuals that will be modeled properties to be used and gives some axioms that restrict the use of that vocabulary.
a) Forms
b) Clause
c) Axioms
d) Value

67. If based on decision the initial data is fetched, then it is called as backward chaining.
a) Backward
b) Predictable
c) First order
d) Forward

68. Knowledge engineering is process of knowledge construction.
a) Based
b) Representation
c) Engineering
d) Capturing

69. The major advantage of lifted inference rules over propositional logic is that only those substitutions are made that are required so as particular inferences are allowed to proceed.
a) Unification
b) Resolution
c) Lifting
d) Contradiction

70. If one observed the reasoning chain stopping in between or some of the queries could not be answer then, it is indication of weak axioms.
a) Knowledge
b) Vocabulary
c) Axioms
d) Debugging

71. If it is raining then I will take umbrella is an example of process forward chaining.
a) Backward chaining
b) Propositional logic

c) Forward chaining
d) Ontology

72. When task come to simple planning agent it has to decide the sequence of actions to be taken and then accordingly execute it.
a) Decisions
b) Movements
c) Operations
d) Actions

73. Domain of probable actions are directly proportional with branching factor.
a) Planning Algorithm
b) Heuristic function
c) Ontology
d) Branching factor

74. In planning approach while solving large problems, technique have to do synthesis of first order and hierarchical representation.
a) Higher order
b) Predictable order
c) First order
d) Sorted order

75. A mutual exclusion relation holds between the actions when one of effects of action is negation of preconditions of other action.
a) Literals
b) Actions
c) Processes
d) Graphs

76. Problem in backward state space search is there can be many possible goal states which are equally acceptable.
a) Forward state space
b) Graph tree
c) Backward state space
d) Directed state space

77. In partial order planning, states are generally unfinished action.
a) Total order panning
b) Regression
c) Partial order planning
d) Linear

78. Conformant type of planning are not based on any perception.

a) Conditional
b) Execution monitoring and replanning
c) Conformant
d) Continuous.

79. In Conditional planning, we can check what is happen in environment at the pre-determined points of plan to deal with ambiguous action.
a) Total order panning
b) Regression planning
c) Partial order planning
d) Conditional planning

80. In online search agent, agent need to experiment its action to learn about theire consequences to learn about state of the world.
    a) Unknown
    b) Problem solving
    c) Online search
    d) GPS

81. In local beam algorithm, having found good minimum, it may then continue to wander around it.
    a) Hill climbing
    b) Simulated annealing
    c) Local beam
    d) Genetic

82. In hill climbing, each state is provided with additional information needed to find the solution.
a) SMA*
b) 8 puzzle
c) Hill climbing
d) A*

83. Depth limit search is incomplete if shallowest goal is beyond the depth limit.
a) Complete
b) Optimal
c) Incomplete
d) Limited

84. In DFS algorithm,when there are no more successors to add to the fringe ,the search "back tracks" to the next deepest node that is still unexplored.
a) BFS
b) UCS
c) DLS

d) DFS

85. Uniform cost search can be achieved by implementing the fringe as priority queue ordered by path cost.
a) Priority queue
b) Array
c) Stack
d) Queue

86. FIPA states that agent is computational process that implement the autonomous functionality of application.
a) IBM
b) FIPA
c) Russell and Norvig
d) F.Mills AND R.Stufflebeam.

87. IN case of Pro-activeness, intelligent agent shows goal oriented behavior by taking the initiatives.
a) Pro-activeness
b) Social ability
c) Reactiveness
d) Self governing

88. In human agent, we need that there "Nervous system "which helps in deciding an action with an assistance effectors, based on input given by sensors.
a) Intelligent system
b) Rational system
c) Nervous system
d) Brain imaging system

89. Frames are records like structures that consist of collection of slots or attributes and corresponding slot values.
a) Blocks
b) Logics
c) Trees
d) Frames

90. Slots have name and values called as facets.
a) Forms
b) Clause
c) Facets
d) Frame

91. “If road is slippery Then driving is dangerous” is the example of production rule representation.
a) Semantic network
b) Production rule representation
c) Frame representation
d) Ontology

92. When based on available data, decision is taken then process is called as forward chaining.
a) Backward
b) Predictable
c) First order
d) Forward

93. In conversion from FOL to clausal normal form(CNF),we perform last step that rename variables to avoid duplicate clauses.
a) Forms
b) Quantifiers
c) Clauses
d) Implications.

94. Encoding means writing atomic sentences about problem instances which are already the part of ontology.
a) Vocabulary
b) Assembly
c) Debugging
d) Ontology

95. In order to get some interested facts inferred from provided knowledge, we can query the knowledgebase.
a) Encode
b) Query
c) Debug
d) Assemble

96. In planning goal, order of planning and order of execution need to be same.
a) Execution
b) Goal
c) Actions
d) Outcomes

97. If there exists a path to goal is present in the last level.
a) First
b) Middle

c) Last
d) Initial

98. Total order planning should take care of preconditions while creating the sequence of actions.

a) Total order planning
b) Regression
c) Partial order planning
d) Linear

99. In co-operation multi-agent strategy, goal can be divided into subgoals but ultimately combine to archive ultimate goal.

a) Co-operation
b) Multi body planning
c) Co-ordination mechanism
d) Competition

100. In case of unknown environment, for the agent to make a decision, it has to gain knowledge about-how the environment works.

a) Static
b) Fully observable
c) Unknown
d) Deterministic