**Program: BE Computer Engineering**

**Curriculum Scheme: Revised 2016**

**Examination: Fourth Year Semester VII**

**Course Code: CSC703 and Course Name: Artificial Intelligence and Soft Computing**

**Time: 1 hour Max. Marks: 50**

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| --- | --- |
| **Q1.** | **State space is…** |
| Option A: | The whole Problem |
| Option B: | Representing your problem with variable and parameter |
| Option C: | Problem you design |
| Option D: | Your Definition to a problem |
|  |  |
| **Q2.** | **An agent is composed of…** |
| Option A: | Architecture and Program |
| Option B: | Perception Sequence |
| Option C: | Agent Function |
| Option D: | Architecture |
|  |  |
| **Q3.** | **The mechanics of human intelligence investigates in…** |
| Option A: | Sociology |
| Option B: | Psychology |
| Option C: | cognitive science |
| Option D: | History |
|  |  |
| **Q4.** | **What is the term used for describing the judgmental or commonsense part of problem solving?** |
| Option A: | Heuristic |
| Option B: | Analytical |
| Option C: | Valued based |
| Option D: | Critical |
|  |  |
| **Q5.** | **Alan Turing developed a technique for determining whether a computer could or could not demonstrate the artificial Intelligence,, Presently, this technique is called** |
| Option A: | Logarithm |
| Option B: | Turing Test |
| Option C: | Boolean Algebra |
| Option D: | Algorithm |
|  |  |
| **Q6.** | **Which of the following is not a valid AI agent type?** |
| Option A: | Simple based Reflex agent |
| Option B: | Model Based Reflex Agent |
| Option C: | Goal Based Agent |
| Option D: | Action based agent |
|  |  |
| **Q7.** | **Which of the following are the main tasks of an AI agent?** |
| Option A: | Movement and Humanly Actions |
| Option B: | Perceiving and acting on the environment |
| Option C: | Input and Output |
| Option D: | No perceiving and acting on the environment |
|  |  |
| **Q8.** | **Which of the following is considered as the most powerful AI agent?** |
| Option A: | Simple based reflex agent |
| Option B: | Model based reflex agent |
| Option C: | Goal based agent |
| Option D: | Utility based agent |
|  |  |
| **Q9.** | **The complete set of rules for defining the valid movements of an AI agent for changing the states** |
| Option A: | What does the above definition refer to? |
| Option B: | Documentation for an AI agent |
| Option C: | Production rules for an AI agent |
| Option D: | Pseudo Code for an AI agent |
|  |  |
| **Q10.** | **Which of the following mentioned searches are heuristic searches?** |
| Option A: | Random Search |
| Option B: | Depth First Search |
| Option C: | Breadth First Search |
| Option D: | Best First Search |
|  |  |
| **Q11.** | **Consider the following statement: "The search first begins from the root node and the first one of the child node’s sub-tree is completely traversed. That is, first all the one-sided nodes are checked, and then the other sided nodes are checked." Which search algorithm is described in the above definition?** |
| Option A: | [The Breadth First Search (BFS)](javascript:void(0);) |
| Option B: | [The Depth First Search (DFS)](javascript:void(0);) |
| Option C: | [The A\* search](javascript:void(0);) |
| Option D: | Greedy search |
|  |  |
| **Q12.** | **In AI systems, Knowledge can be represented in two ways. What are these two ways?** |
| Option A: | Machine Logic, Compound Logic |
| Option B: | Predicate Logic, Propositional Logic |
| Option C: | Propositional Logic, Active logic |
| Option D: | Compound Logic, predicate logic |
|  |  |
| **Q13.** | **What does a first order predicate logic contain?** |
| Option A: | Predicate and a subject |
| Option B: | Predicate and a Preposition |
| Option C: | Subject and an object |
| Option D: | No predicate logic |
|  |  |
| **Q14.** | **In AI, the Logic is classified into two types: deductive and inductive. Which of the following approaches is followed up by the Inductive logic?** |
| Option A: | Top-down approach |
| Option B: | Bottom-up approach |
| Option C: | No specific approach |
| Option D: | According to precedence |
|  |  |
| **Q15.** | **Which of the mentioned rules are not valid Inference rules?** |
| Option A: | Modus Ponens |
| Option B: | Resolution |
| Option C: | Backward Chaining |
| Option D: | Yes-no rule |
|  |  |
| **Q16.** | **What is the minimum Certainty factor which decided whether the value is true or false?** |
| Option A: | 0 |
| Option B: | -1 |
| Option C: | +1 |
| Option D: | Is decided in prior to every problem |
|  |  |
| **Q17.** | **Who initiated the idea of Soft Computing** |
| Option A: | Rechenberg |
| Option B: | Lofti A Zadeh |
| Option C: | Charles Darwin |
| Option D: | Mc\_Culloch |
|  |  |
| **Q18.** | **Genetic Algorithm is not part of** |
| Option A: | inspired by Darwin's theory about evolution - "survival of the fittest" |
| Option B: | are adaptive heuristic search algorithm based on the evolutionary ideas of natural selection and genetics |
| Option C: | Evolutionary Computing |
| Option D: | inspired by Darwin's theory about evolution - "survival of the not fittest" |
|  |  |
| **Q19.** | **Supervised Learning is** |
| Option A: | learning without teacher |
| Option B: | learning with teacher |
| Option C: | learning with the help of examples |
| Option D: | learning with computers as supervisor |
|  |  |
| **Q20.** | **An auto-associative network is:** |
| Option A: | a) a neural network that contains no loops |
| Option B: | b) a neural network that contains feedback |
| Option C: | c) a neural network that has only one loop |
| Option D: | d) a single layer feed-forward neural network with pre-processing |
|  |  |
| **Q21.** | **Neural Networks are complex \_\_\_\_\_\_\_\_\_\_\_\_\_\_ with many parameters.** |
| Option A: | a) Linear Functions |
| Option B: | b) Nonlinear Functions |
| Option C: | c) Discrete Functions |
| Option D: | d) Exponential Functions |
|  |  |
| **Q22.** | **In an Unsupervised learning** |
| Option A: | a) Specific output values are given |
| Option B: | b) Specific output values are not given |
| Option C: | c) No specific Inputs are given |
| Option D: | d) Both inputs and outputs are given |
|  |  |
| **Q23.** | **A perceptron is a ——————————–.** |
| Option A: | a) Feed-forward neural network |
| Option B: | b) Back-propagation algorithm |
| Option C: | c) Back-tracking algorithm |
| Option D: | d) Feed Forward-backward algorithm |
|  |  |
| **Q24.** | **Automated vehicle is an example of \_\_\_\_\_\_.** |
| Option A: | a) Supervised learning |
| Option B: | b) Unsupervised learning |
| Option C: | c) Active learning |
| Option D: | d) Reinforcement learning |
|  |  |
| **Q25.** | **How many things are concerned in design of a learning element?** |
| Option A: | a) 1 |
| Option B: | b) 2 |
| Option C: | c) 3 |
| Option D: | d) 4 |