Lesson 1

1	What is Artificial Intelligence? a. Enlarging computer memory space b. Programming with human intelligence c. Putting human intelligence inside computer d. **Making a machine intelligent**
2	Who proposed the Turing Test and in which year? a. Gottlob Frege, 1925 b. **Alan Turing, 1950** c. George Boole, 1864 d. Steven Cook, 1971
3	Which of the following Al techniques helps the computer to establish a relationship between events and objects? a. Relative symbolism b. **Cognitive science** c. Heuristic processing d. Pattern matching
4	__ _____ Turing test refers to . a. **Acting Humanly** b. Thinking Humanly c. Thinking Rationally d. Acting Rationally
5	What is Cognitive Modelling Approach? a. A way to act Humanly b. **A way to think Humanly** c. A way to think rationally d. A way to act rationally
6	Which environment will an agent prefer to perceive and act upon? a. Perceivers b. **Sensor and actuators** c. Sensors

	d. External agents
7	Which of the following fields examines the mechanism of human intelligence? a. **Cognitive science** b. Sociology c. Phycology d. History
8	What is the objective of Al? a. Putting your intelligence into Computer b. Programming with your own intelligence c. **Making a Machine intelligent** d. Playing a Game
9	Who is the father of Al? a. Fisher Ada b. **John McCarthy** c. Allen Newell d. Alan Turning
10	At which of the following places, did the Al revolution conference happen in 1956? a. **Dartmouth** b. Harvard c. New York d. Stanford
11	Capabilities not requires by the machine to pass Turing test a. NLP b. Knowledge representation c. Automated reasoning **d. Computer vision**
12	_____ is being used by big financial corporations for performing functions such as fraud detection, predicting stock market variations, and advising clients for best investment options. **a. Deep Learning** b. Robotics c. IOT d. Cloud technology
13	Google's predictive search feature and Amazon's Alexa are prime examples of ____

	a. Robotics b. **NLP.** c. Neural network d. Machine learning
14	Following are the supporting technologies for Al a. Graphical processing units (GPUs), b. Internet of Things (loT), c. cloud computing, and advanced algorithms **d. All the above**
15	Artificial Intelligence was propounded by a. Allen Turing 1950 **b. John McCarthy 1956** c.
16	____ is a system that can learn and act intelligently for a specific domain of expertise. **a. Weak AI** b. Strong AI c. NLP d. IOT
17	The best example of _____is Watson supercomputer, which is a "question answering" machine, developed by IBM. **a. narrow Al** b. Strong AI c. IOT d. None of the mention.
18	_____ refers to a system which derives knowledge from diverse sources and employs cognitive computing capabilities that makes it as powerful as a human being in terms of'thinking". a. Weak AI b. **Strong** AI c. NLP d. IOT
19	Which is not a the features of Natural Intelligence a. Natural intelligence is based on cognitive abilities such as thinking and reasoning. b. Natural intelligence tends to provide less accuracy and speed is also slow when the same task is being executed several times. c. Decision-making abilities are usually subjective in nature. **d. It is difficult to adapt to changes by perceiving its environment.**
20	Which is not a the features of Artificial Intelligence a. It takes a huge amount of time to adapt to new changes. b. It works on digital signals where information flows in the form of bits. c. Decision-making abilities are objective in nature.

	d. **Accuracy becomes low when the same task is executed several times.**
21	what are not components of AI a. AI reasoning b. Machine learning c. Neural network **d. Adaptation**
22	_____ is a form of logical reasoning wherein the focus moves from general to particular, assuming the premises are true. a. Objective reasoning **b. Deductive reasoning** c. Inductive reasoning d. Subjective reasoning
23	Al _____ is based upon the Al search techniques for searching potential solution by performing various functions. a. Problem generating **b. problem solving** c. problem enhancing d. problem covering
24	It is a _____ process to solve a problem using Al. a. Three-step b. Four-step **c. five-step** d. Depend upon situation.
25	_____ refers to the kind of software which are specifically designed to converse with the humans in a natural way either through text-based conversation or spoken word. **a. Chatbot** b. NN c. Virtual device d. Intelligent Agent
26	_____ is a process of learning from a large training dataset that can be treated as a supervisor which enhances the entire learning process such as face recognition and speech recognition. a. Unsupervised ML **b. Supervised ML** c. Reinforcement ML d. Intelligent learning
27	In _____ , only the input dataset is known, and further output needs to be drawn based upon the previous experience. **a. Unsupervised ML** b. Supervised ML c. Reinforcement ML d. Intelligent learning

28	_____ refer to the series of the sequenced steps or commands to perform a specific task. a. Problem solving b. Problem generating **c. Algorithm** d. Problem defining
29	Which is not a 'V' in big data a. Velocity b. Volume **c. Versatility** d. Variety
30	_____ approach helps us to understand how a given program thinks like a human. There are three basic methods to understand the working of human minds that are explained as follows: **a. Cognitive modelling** b. Laws of thoughts c. Turing test d. Rational approach
31	_____, which was developed by Newell and Simon in 1961, not only solved problems correctly but also compared the trace of its reasoning steps to traces of human subjects solving the same problems. a. Algorithm **b. General problem solver program** c. AI d. Neural Network
32	Laws of thoughts have hurdles as a. Much of the worldly knowledge is informal in nature b. There is a wide gap between solving a problem theoretically and solving it in a practical way. **a. Both mention** b. None of the mention
33	Medical diagnosis system, interactive English tutor, and satellite image analysis system are other real- life examples of _____. a. Cognitive modelling **b. Rational agents** c. Turing test approach d. Laws of thoughts
34	_____ ignore the history of the perceptions and take action on the basis of the current percept only. They can perform the functions if the environment is fully observable, and right action is based on what is perceived currently. **a. Simple reflex agents** b. Model-based reflex agents c. Goal-based agents

	d. Utility-based agents
35	_____ are supposed to track the internal state changes which can be modified through precepts. a. Simple reflex agents **b. Model-based reflex agents** c. Goal-based agents d. Utility-based agents
36	_____ take an appropriate decision depending on how far they are currently from achieving the desirable situations i.e. goals. a. Simple reflex agents b. Model-based reflex agents **c. Goal-based agents** d. Utility-based agents
37	What are the trends for the growth of AI a. Advancement in computing and processing b. Emergence of Big data c. Increase in investment and funding **d. All the above**
38	In 2010, "Flash Crash" event in the US stock market had left the entire financial world shocked, that event is called as **a. Black swan event** b. White swan event c. Grey swan event d. None of the mention
39	The Facebook-Cambridge Analytica data scandal in 2018 where personal details of more than 87 million Facebook users are extracted, is an example of a. Loss of Employment **b. Invasion of privacy and manipulation** c. Generation of fake content d. cybersecurity
	Lesson 2
40	_____ focuses on reaching the goal state or goal node without considering the path that needs to be followed. a. Global search techniques **b. local search techniques** c. Path finder d. Data mining
41	_____ can be used as a problem-solving technique for extracting, analyzing and subsequently carrying out the process of knowledge discovery in databases. a. Data Acquisition **b. Data mining**

	c. Data warehouse d. Game theory
42	A _____can be defined as a type of search problem involving two or more players having known pay-outs that can be quantified. a. AI **b. Game** c. Informal searched d. Formal search
43	Problem-solving using Al does not consists of following step: a. Define the problem and its search space b. Identify the start state and goal state c. Find the path beginning from the start state to reach the goal state within the search space **d. Estimate the cost of the reaching goal**
44	The classical problem-solving techniques work on hit-and-trial method, which is also known as _____. a. Data mining b. Game theory **c. Generate and Test technique** d. Innovative technique.
45	Which Parameter is not used to evaluate efficiency of the search technique a. Completeness b. Optimality c. Time and Space Complexity **d. User friendly**
46	Uninformed search is also called as **a. Blind search** b. Informed search c. Heuristic search d. Formal search
47	_____ techniques use the information available in the given problem definition and do not have any additional information on how to reach the goal node. **a. Uninformed search** b. Informed search c. Heuristic search d. Formal search
48	Which is the false statement about Informed search: a. Along with problem definition, a heuristic function value is also given which makes the search efficient. b. They are not capable of handling a wide range of problems because of the requirement for domain-specific knowledge before starting their problem-solving operations. c. They find solution to a problem quickly.

	d. They require more computing power for carrying out their operations.
49	Following is the Informed search technique a. Breadth first search b. Depth-first search **c. Best first search** d. Uniform cost search
50	To traverse the node of a BFS graph _____ data structure approach is followed which works on FIFO policy. a. Stack **b. Queue** c. Linked List d. Array
51	Following are the advantages of BFS a. There is no trapping state while traversing a graph using a BFS algorithm. b. It is a time-consuming process depending on the height of a graph, but a goal state will surely be achieved. c. BFS select the best possible path from a given set of solutions. **d. Maximum utilization of memory space.**
52	To traverse the node of a DFS graph _____ data structure approach is followed which works on LIFO policy. e. **Stack** **a.** Queue b. Linked List c. Array
53	In Informed search method, _____ is the cost to reach the node or the distance between one node to the other node. **a. g(n)** b. h(n) c. f(n) d. k(n)
54	____ is the heuristic value or the value held by the current node to reach the goal node. a. g(n) **b. h(n)** c. f(n) d. k(n)
55	In certain search problems path to the goal is irrelevant, such techniques are called as **a. local search techniques** b. global search techniques

	c. min-max techniques d. Quick search techniques
56	____ is a hill climbing technique in which it first examines all the neighboring nodes and selects a node which is nearest to the solution state, thereby giving an optimal solution. a. Simple hill climbing **b. Steepest ascent hill climbing** c. Stochastic hill climbing d. Simple Stochastic hill climbing
57	_____ refers to a plateau having an uphill edge. a. Flat local maximum **b. Shoulders** c. Plateau d. Current state
58	_____ are evolutionary search algorithms that work on the concept of natural selection and genetics. a. Neural network b. Data mining **c. Genetic algorithm** d. Clustering
59	Within a chromosome, swapping of genes with one another is known as _____ a. **mutation** b. Crossover c. Chromosomes d. Population
60	Following is not an Advantage of implementation of Genetic Algorithm. **a. GA is not capable of finding a heuristic solution within a time limit.** b. Coding of GA is easier when compared with other heuristic algorithms. c. GA is good for a noisy environment. d. GA gives optimal result even if the problem is a mixture of discrete and continuous datasets.
61	The major goal of _____ techniques is to establish a relationship between huge datasets and extracting various patterns from them; which would further help in analyzing the pattern to draw the conclusion. a. Pattern recognition **b. data mining** c. genetic algorithm d. nearest neighbor

62	KDD stands for **a. Knowledge discovery in databases** b. Know disk space for database c. Knowledge discover and determine d. Know database and discover more
63	Fayyad et al. said that "____ is a non-trivial process of identifying valid, novel, potentially useful and ultimately understandable patterns in data". a. Data mining **b. KDD** c. Pattern identifying d. Trnasformation
64	It is not a disadvantages of Data mining a. Privacy b. Security **c. Market analysis** d. None of the mention.
65	_____ provides a conceptual framework for the formulation of social situations among competing players. a. Genetic algorithm **b. Game theory** c. Neural network d. Deep learning
66	Which of the following refers to informed search strategy? a. Online search b. **Heuristic search** c. Simple search d. uninformed
67	Which of the following search techniques is used to select the node with the lowest cost value? a. Genetic Algorithm **b. Best first search** c. Depth-first search d. Breadht-first search
68	Which of the following refers to the outcomes or consequences of strategy in game theory? **a. Payoff** b. Equilibrium c. Reward d. End game strategy
	Lesson 3
69	Who defined knowledge engineering as "an engineering discipline that involves integrating knowledge into computer systems in order to solve complex problems normally requiring a high level of human expertise." a. Allen Turing and MaCarthy

	b. Feigenbaum and McCorduck c. Allen and Feigenbaum d. MacCarthy and Feigenbaum
70	_____is the process of knowledge acquisition from experts and creation of a knowledge base. a. Knowledge representation **b. Knowledge engineering** c. Expert system d. Knowledge inferencing
71	_____ is the first and most important step in the knowledge engineering process. a. Knowledge validation b. Knowledge representation **c. Knowledge acquisition** d. inferencing
72	This task is not covered by Knowledge engineer while designing a KBS a. Acquire the knowledge from expert(s) to be used in the system b. Represent knowledge in an easy-to-understand form c. Design the software and implement it **d. Train IOT device to provide correct input to the system**
73	_____ knowledge represents the facts, concepts and generalisations about a subject **a. Declarative knowledge** b. Procedural knowledge c. Meta-knowledge d. Database knowledge
74	_____ knowledge defines the set of steps or alternative actions that can be taken to carry out the execution of a task. a. Declarative knowledge **b. Procedural knowledge** c. Meta-knowledge d. Database knowledge
75	_____ knowledge consists of information about definition of the problem, gathering of data, solution process, and evaluation criteria. Declarative knowledge Procedural knowledge Meta-knowledge **Database knowledge**
76	_____ is concerned with the knowledge which describes the operation of knowledge-based systems. a. Declarative knowledge **b.** Procedural knowledge **c. Meta-knowledge** d. Database knowledge

77	_____ are meant to be modelled according to the biological structuring of the human brain. **a. The Neural networks** b. Case based reasoning c. Genetic algorithm d. Intelligent agent
78	In _____, rather than any fixed set of rules, system encounters a new situation/problem it reviews the cases present in knowledge base for solution. **a. The Neural networks** b. Case based reasoning c. Genetic algorithm d. Intelligent agent
79	_____ is a process which is used to extract, analyse and subsequently carry out knowledge discovery process a. Expert system b. Genetic Algorithm **c. Data mining** d. Intelligent tutoring systems
80	**Byju's are best** examples of _____ a. Expert system b. Genetic Algorithm **c.** Data mining **d. Intelligent tutoring systems**
81	Knowledge engineering is a ___ steps process. a. 3 b. 4 **c. 5** d. 6
82	Using _____, the knowledge engineer can easily identify whether a piece of software is able to meet the user demand or not. a. Knowledge Acquisition **b. Knowledge Validation** c. Knowledge Representation d. Inferencing
83	_____ means acquiring knowledge from human experts, books, documents, sensors, or computer files a. **Knowledge Acquisition** **b.** Knowledge Validation c. Knowledge Representation d. Inferencing
84	Knowledge Acquisition methods can be broadly classified into ____ categories. **a. 3** b. 4 c. 5 d. 6

85	Interview, process tracking and observations are the examples of _____ method of acquiring data. **a. Manual** b. Automated c. Semi-automated d. Combination of Manual and Automated
86	Unstructured and Structured are the two methods of _____ a. Process tracking **b. Interview** c. Observation d. None of the mention
87	Repertory Grid Analysis (RGA) based on George Kelly's personal construct theory(1955) of_____. a. Acquisition b. **Personality** c. Experience d. Domain
88	What is not a advantage of using Automated knowledge acquisition a. Increased productivity & reduced cost **b. Increase the efforts of the knowledge engineer** c. Improved quality d. Reduced need of experts
89	This is a difficulty in implementing rule induction method a. It works well only when the number of attributes is small. b. The method may ignore significant attributes. c. It is only suitable for rule-based classification problems. d. **All the above**
90	_____ is one of the best tools that is most widely used to perform the searching process and to acquire knowledge for carrying out the execution process. a. KDD **b. Google search** c. Neural network d. All the above
91	Which is not a knowledge representation way a. Production rule b. Sematic network **c. Production analysis** d. Decision Tree
92	In this method, knowledge is represented in the form of if-then rules. **a. Production rule** b. Sematic network c. Production analysis d. Decision Tree

93	What is not the issue in knowledge representation a. Important attributes b. Granularity **c. Relationship among structure** d. Representing set of objects
94	_____ are the software or information system or any other computer application which solve the complex problems of a domain. a. system **b. Expert systems** c. Intelligent machine d. Sematic network
95	Various activities like Assessment of need, Evaluation of alternative solution, Feasibility study are the activities performed in ____ **a. Project initialization** b. System analysis and design c. System development d. Rapid prototyping
96	What is the third stage in the process of expert system development a. Project initialization b. System analysis and design c. System development **d. Rapid prototyping**
97	In which of the following methods, an expert is asked to verbalise his thought process while solving a problem or making a decision? a. **Protocol analysis** b. Repertory Grid Analysis c. Knowledge discovery d. Observations
98	Which of the following method of acquiring knowledge was developed by George Kelly in 1955? a. Protocol analysis b. **Repertory Grid Analysis** c. Knowledge discovery d. Observations
99	What is a semantic network? a. **It is a way of representing a knowledge** b. It is a data structure c. It is a data type d. It is a network within a network
	Lesson 4

100	_____ designed by IBM, defeated world champion Garry Kasparov in the year 1996. a. AlphaGo **b. Deep Blue** c. Chinook d. Tinsly
101	_____ is a branch of applied mathematics which provides various tools for analyzing situations in which agents, also called players, make interdependent decisions. a. Genetic algorithm b. Neural network **c. Game theory** d. Data mining
102	_____ used game theory to analyse and solve problems in economics. **a. John Von Neumann and Oskar Morgenstern** b. Allen Turing and MaCarthy c. Feigenbaum and McCorduck d. Allen and Feigenbaum
103	Which is not a importance components of Game theory a. Initial state **b. Validation state** c. Successor function d. Utility functions
104	Which is not a prominent examples of Game theory a. Prisoner's dilemma **b. Nash equilibrium** c. Dictator game d. Volunteer's dilemma
105	The strategy by which a player optimizes its gains or losses without knowing the opponents' strategy is known as an _____ a. Max min algorithm **b. optimal strategy** c. Alpha beta pruning d. All the mention
106	____is based on a zero-sum game where the total sum of the game is divided among the players. **a. Minimax strategy** b. optimal strategy c. Alpha beta pruning d. All the mention
107	A transition probability function T is given by **a. $T: QxA_txA_2xA_3 \quad A_nxQ \rightarrow [0, 1]$** b. $r_i: QxA_jxA_2x...xA_n \rightarrow R$ c. $T= QxA_txA_2xA_{3\rightarrow} R$ d. None of the mention

108	In prisoner's dilemma, which of the following scenarios represents Nash equilibrium? a. When both the prisoners do not confess b. When either of the prisoners confesses c. **When both the prisoners confess** d. Both a and b
	Lesson 5
109	____ defines machine learning as "a field of study that gives the ability to the computer for self-learn without being explicitly programmed". **a. Arthur Samuel** b. MaCarthy c. Feigenbaum d. McCorduck
110	The second major breakthrough was the invention of _____ in the year 1969, which later gave rise to the Internet. a. Data mining **b. ARPANET** c. Game theory d. Web App
111	Number of steps involves on machine learning process are a. 4 b. 5 c. 6 **d. 7**
112	Types of Machine learning are a. Supervised b. Unsupervised c. Reinforcement **d. All of the mention**
113	____, In this type of linear regression, more than one independent variable is used along with only one dependent variable. a. Single linear regression **b. Multiple linear regression** c. Simple linear regression d. Aggressive linear regression
114	If P is the probability of occurrence of the event then __ is the probability of not occurring that event. **a. 1-P** b. P+1 c. 1*P d. 1-*p
115	Decision tree also known as a. CORT **b. CART** c. Variation of Decision Tree

	d. None of the mention
116	Which is the correct a. ENTROPY = p(a)-log(p(a)) / p(b)-log(p(b)) b. ENTROPY = p(a)/log(p(a)) - p(b)/log(p(b)) **c. ENTROPY = p(a)*log(p(a)) - p(b)*log(p(b))** d. ENTROPY = p(a)+log(p(a)) - p(b)+log(p(b))
117	Which is correct about SVM **a. Whatever the size of data, the training time is fixed in SVM.** b. SVMs are used for recognizing hand-written characters and validating signatures on documents. c. SVMs are used for classifying images with greater search accuracy. d. SVMs can classify online documents such as news articles, blogs, emails and webpages.
	Lesson 6
118	_____ are information processing mechanisms that are inspired by the way brain processes information. a. Genetic Algorithm **b. Neural networks** c. Data mining d. Deep learning
119	In 1943, _____ developed a technique known as "threshold logic unit" which intended to mimic the functioning of the human brain. **a. Warren McCulloch and Walter Pitts** b. Datmouth and Frank Rosenbalt c. Donald Hebb d. Hetch Nielsen
120	ANN consists of a. Neurons **b. Substractor function** c. Activation function d. Step function
121	In neural network W=n x d x X equation d stand for a. rate of change in weight b. Learning rate, its value is mostly less than 1 **c. evaluated output - desired output** d. Data input to the neuron
122	In ANN, $w_1x_1+ w_1x_{1+} w_1x_{1+\ldots} +w_nx >\theta$ for this case output generated will be **a. 1** b. 0 c. Less than 1 but greater than 0 d. Depend on input

123	What is correct? a. Hopfield network consists of fully connected nodes having auto associative memory. b. Hopfield network comprises only a single layer where every neuron is connected to each other. **c.** In Hopfield network the total number of nodes, inputs and outputs are equal. d. **Hopfield network is not suitable for solving different types of pattern recognition problems.**
124	Which of the following is not a layer of a neural network? a.Input layer b.Hidden layer c.Output layer d.**Active layer**
125	Who among the following wrote "Organization of Behavior"? a.Frank Rosenblatt b.**Donald Hebb** c.Walter Pitts d.Nathanial Rochester
126	Which of the following is used to reduce the difference between the actual output and the desired output of a model? a.**Vanishing Gradient** b.Supervised Learning c.Reinforcement Learning d.Backpropagation algorithm
127	_____ are a special kind of feed backward ANN and are capable enough to learn long term dependencies. a. RCC network **b. LSTM networks** c. Perceptron d. Multilayer
128	______, In this model, all the neurons can perform both input and output task. a. ANN **b. Hopfield Network** c. Recurrent NN d. Backpropagation NN
129	_____ , known as a feed backward model wherein the total number of nodes, inputs and outputs are equal. a. ANN b. Recurrent NN **c. Hopfield Network** d. Backpropagation NN

130	Following is not a property of Hopfield networks: **a. Weight between every node is asymmetric.** b. The connection of a node to itself is not allowed. c. Nodes are updated asynchronously which means they are selected randomly. d. A node has no hidden nodes or layers.
131	What is not a advantage of ANN a. They solve problems by example b. They can be used to perform nonlinear statistical modelling c. **They find it difficult to adapt to unknown situation** d. They make use of parallel processing.
132	Applications of ANN are a. Pattern recognition b. Time series forecast c. Signal Processing **d. All the mention**
	Lesson 7
133	Deep learning adopts distributed approach to deal with __ a. feedback **b. Big data** c. Output layer d. Hidden layer
134	__ is most widely applied in the field of image processing and in natural language processing (NLP). **a. Convolutional Neural network** b. Hopfield network c. Deep Belief network d. Autoencoder Model
135	In ____ the output layer consists of the same number of nodes as present in the input layer. a. Convolutional Neural network b. Hopfield network c. Deep Belief network **d. Autoencoder Model**
136	_____ is a recurrent neural network having stochastic binary units. **a. Boltzmann Machine** b. Hopfield network c. Deep Belief network **d. Autoencoder Model**
137	TensorFlow is preferred because: a. It provides simple documentation and excellent community support. b. It contains a visual debugging tool. c. It is freely available on the web, embedded systems and mobile devices.

	d. **All the above**
138	Speech recognition, handwritten recognition, forecasting and predictions are the examples of a. PyTorch **b. MXNet** c. Caffe d. TensorFlow
	Lesson 8
139	____along with deep learning and data mining techniques makes it possible to generate an output in a natural language based upon the given input language. a. Text Analysis **b. NLP** c. Genetic Algorithm d. Alll the mention
140	ELIZA and SHRDLU are some of the prime examples of early ___ developed in the 1960s. **a. NLP** b. Text Analysis c. Genetic Algorithm d. Alll the mention
141	____ is a branch of linguistics that studies systems of sounds within a language or between different languages. a. Morphology **b. Phonology** c. Semantics d. Pragmatics
142	____ deals with the study of words, the way they are formed, and their relationship with other words. **a. Morphology** b. Phonology c. Semantics d. Pragmatics
143	There are ___ components of NLP **a. 2** b. 3 c. 4 d. 5
144	In NLP, content selection, Textual organization, linguistics resources, and Realization comes under __ a. Speaker and Generator **b. Components and levels of representation** c. Application or speaker d. All of the above
145	In which of the following phases logical meaning is drawn from the input text? a. Syntax analysis b. **Semantics analysis**

	c. Morphological analysis d. Pragmatics analysis