Name = Tariq Bilal

ID = 13588

Class = Bs(cs)

Subject= Artificial Intelligence

Q1) Most of the solution spaces for problems can be represented in a _____
A ) Graph

Q2) By getting grips on_____that deal with searching techniques in graphs and trees, problem solving can be performed in an efficient manner.
B)Algorithms

Q3) Every graph can be converted into a tree.
A)True

Q4) In Breadth First Search the node with the largest value of height will be at the _____priority to be picked.
A)Maximum

Q5) Breadth-First Search checks all paths of a given length before moving on to any longer paths.
B)False

Q6) Breadth-first search is a good idea when you are confident that the branching factor is
B)Small

Q7) The foot hill problem occurs whenever there are_____peaks.

B)Secondary

Q8) The Plateau problem comes up when there is a mostly flat area _____ the peaks.
A)Separating

Q9) Which one of the problem is more subtle, and consequently, is more frustrating:
C)Ridge

Q10) The paths found by best-first search are likely to be_____than those found with other methods.
B)Shorter

Q11) In Basic Genetic Algorithm the term mutation refers to a small random____.
B)Change

Q12) Which of the following two components are closely coupled and each is intrinsically tied to the other.
D)i & ii

Q13) Semantic networks are graphs, with nodes representing_____and arcs representing_____between objects.
A)objects, relationships

Q14) A proposition is the statement of a_____.
A)Fact

Q15)_____ reasoning is based on forming, or inducing a 'generalization' from a limited set of observations.
c)Analogical

Q16) An_____is "A computer program designed to model the problem solving ability of a human expert."
A)Expert system

Q17) Another expert system named_____was developed byDigital Equipment Corporation, as a computer configuration assistant.

A)R1/XCON

Q18) An expert system may replace the expert or assist the expert.
A)True

Q19) Conventional programming focuses on_____, while ES programming focuses on _____
A)Solution, Problem

Q20) In backward chaining terminology, the hypothesis to prove is called the____.
B)Goal

Q21) Give definition of Expert System.
Ans) An expert system is emulates the decision making ability of a human experts. An expert system designed to solve complex problem by reasoning and knowledge. According to Durkin, "A computer system designed to model the problem solving ability of a human expert.

Q22) What is depth first search? give priority function for it.

Ans) Depth first search is an algorithm for traversing and searching tree and graphs. Depth first search is an uninformed search progressed by expanding the first child node of the tree and thus going deeper and deeper until a goal is found. We will use same simple search algorithm to implementation of DFS by this function priority (P n) = 1 / high(n)

Q23) Write down at least 5 names for the application fields of Genetic Algorithm.
Ans) Robotic Gaming Industrial Optimization Genetic programming Marketing strategies Composing music

Q24) Discuss backward chaining with the help of doctor and patient example.
Ans) Backward chaining is an inference strategy that works backward from a hypothesis to proof. Backward chaining is like depth first strategy. In backward chaining all the terminology the hypothesis to prove is called goal. It is start with the list of goals. Goals may be in working memory initially so check and you are done if found if not then search for goal in the THEN part of the rules conclusion rather than premises this type of rule are called Goal. Premises not listed become sub goals to prove. Process continues in a recursive fashion until a premise is found that is not supported by a rule a premise is also called primitive if it cannot be conclude by any rule when a primitive is found ask user for information about it back track and use this information to prove sub goals and subsequently the goal.
Backward chaining example:

Rule 1:
IF : A patient has deep cough
AND : We suspect an infection
THEN : The patient has phenomena

Rule: 2
IF : The patient's temperature is above 100
THEN : Patient has fever

Rule 3:
IF : The patient has been sick fortnight
AND : The patient has fever
THEN : We suspect an infection