Assignment 7

The due date for submitting this assignment has passed. As per our records you have not submitted this assignment.

1) Model Based Diagnosis employs
   - mathematical models of devices that generate predicted behaviour.
   - algorithms to search the space of models consistent with observations.
   - diagnosis arrived at by manipulating physical models of devices.
   - algorithms to mimic how human technicians learn diagnosis.

   No, the answer is incorrect.
   Score: 0

   Accepted Answers:
   mathematical models of devices that generate predicted behaviour.
algorithms to search the space of models consistent with observations.

2) A model used in model based diagnosis constitutes of -
   - behaviour models of individual components.
   - physical models of the individual components.
   - a black box model of the device under consideration.
   - a set of connections that connect different components.

   No, the answer is incorrect.
   Score: 0

   Accepted Answers:
   behaviour models of individual components.
a set of connections that connect different components.

3) A Truth Maintenance System (TMS) is
   - keeps track of all the true statements in a story.
   - a program that does the book keeping and consistency management for a problem solver.
   - a program that adds new values to maintain the truth value of the premises.
   - a program that routinely deletes false statements from a knowledge base.

   No, the answer is incorrect.
   Score: 0

   Accepted Answers:
a program that does the book keeping and consistency management for a problem solver.

4) In a Truth Maintenance System a justification is
   - made for an assertion that is added based on an inference.
   - a link to the assertions that match the antecedent(s) of the rule used for inference.
   - an argument that justifies why the TMS should be used.
   - a reason given why a particular rule was chosen to be fired.

   No, the answer is incorrect.
   Score: 0

   Accepted Answers:
   made for an assertion that is added based on an inference.
5) A Truth Maintenance System (TMS) can
- keep a watch on the consistency of the beliefs of an agent.
- add new beliefs that are consistent with the beliefs held by the agent.
- can help identify the source of inconsistency of beliefs held by an agent.
- can clean up the justifications to make all beliefs true.

No, the answer is incorrect.
Score: 0
Accepted Answers:
keep a watch on the consistency of the beliefs of an agent.
can help identify the source of inconsistency of beliefs held by an agent.

6) Based on the given diagram answer the following up to question 10

For adder multiplier circuit given in the figure above and the observed values– which of following are conflict sets,
- M1, M2, M3
- A1, A2
- M1, M2, A1
- M2, M3, A2
- A1, A2, M3

No, the answer is incorrect.
Score: 0
Accepted Answers:
M2, M3, A2

Given the above conflict set which of the following cannot be a single fault
- A1
- A2
- M1
- M2
- M3

No, the answer is incorrect.
Score: 0
Accepted Answers:
A1
M1

8) Given the above conflict set which of the following cannot be a double fault
- A1, A2
- A1, M1
- A1, M2
- M1, M2
- A2, M2
- A2, M3
- M2, M3

No, the answer is incorrect.
Score: 0
Accepted Answers:
A1, M1
M1
9) For the above adder multiplier circuit and the data shown which of the following is another conflict set

- A1, A2, M1, M2
- A1, A2, M1, M3
- A1, A2, M2, M3
- A1, M1, M2, M3
- A2, M1, M2, M3

No, the answer is incorrect.
Score: 0
Accepted Answers: A1, A2, M1, M3

10) Given the conflict sets above which single faults are eliminated

- A1
- A2
- M1
- M2
- M3

No, the answer is incorrect.
Score: 0
Accepted Answers: A1, M1, M2

11) Based on the given diagram, answer the following up to question 13

In the above circuit the components that can fail are the wires W₁ ... W₆, the three bulbs B₁, B₂ and B₃, and the battery S, it is observed that the bulb B₂ is not glowing. Using consistency based diagnosis without fault mode which of the following can be faults

- Only bulb B₂
- Only wire W₂
- Only battery S
- Wires W₅ and W₆
- Battery S and bulb B₂

No, the answer is incorrect.
Score: 0
Accepted Answers: Only bulb B₂, Wires W₅ and W₆
In model based diagnosis fault modes can be instrumental in

- identifying the faulty components
- identifying which components can fail
- eliminating spurious candidates in diagnosis
- explain why a component failed

No, the answer is incorrect.
Score: 0
Accepted Answers:
- eliminating spurious candidates in diagnosis