Roll No.: | | | | | | | |

MIT-ADT UNIVERSITY
PUNE, INDIA
A leap towards World Class Education

MIT School of Engineering, Pune
Term Assessment: 2 (2020-21)

Branch Code: BTCSE **Class: T. Y. B. Tech** **Semester: III**

Branch: Computer Science & Engineering

Subject Code: 18BTCS504: Artificial Intelligence

Date : 09-12-2020 Max. Marks: 20

Time : 10:30 am to 11:30 am

Instructions

1. Attempt the Que 1 OR Que 2 and Que 3 OR Que 4.
2. Neat diagrams must be drawn, wherever necessary.
3. Use of logarithmic tables, slide rule, Mollier chart, electronic scientific calculator and steam tables are allowed.
4. Figures to right indicate the marks allotted to the questions.

Q1. Attempt the following questions **[10]**

a) Explain methods of conversion of constraint graph can be reduced to tree.

b) How many solutions are there for the map-coloring problem? How many solutions if four colors are allowed? Two colors?

OR

Q2. Attempt the following questions **[10]**

a) Give precise formulations for Job Scheduling problem of a small car assembly unit consist of install axel, affix wheels, tighten nuts, affix hubcap and inspection as constraint satisfaction problems

b) Define different types of local consistency in detail.

Q3. Attempt **the** following Questions **[10]**

a) Convert following natural language sentences to predicate logic:

1. Marcus was a man
2. All Pompeians were Romans
3. All Romans were either loyal to Caesar or hated him
4. People only try to assassinate rulers they aren't loyal to

b) Explain different techniques of knowledge representations.

OR

Q4. Attempt **the** following Questions **[10]**

a) Explain cycle of knowledge representation in AI.

b) How knowledge-based agent is exploring Wumpus world problem.

******