

(Please write your Exam Roll No.)

Exam Roll No. _____

MID TERM EXAMINATION

SIXTH SEMESTER [B.TECH.] FEB-2019

Paper Code: ETCS-310

Subject: Artificial Intelligence

Time: 1:30 Hours

Maximum Marks: 30

Note: Attempt any Three questions including Q. No. 1, which is compulsory

Q No. 1

- a) How do you define Artificial Intelligence in terms of its task domain?
- b) How production system useful for solving AI problems?
- c) What approaches required for the representation of knowledge in a particular domain?
- d) A problem-solving search can proceed either forward or backward. What factors determine the choice of direction for a particular problem?

[2.5X4]

Q No. 2

- a) What is AI? How do you compare human intelligence with artificial intelligence? [5]
- b) How do you define the characteristics of a problem, for the solution that is desired and the circumstances under which the solution must take place? [5]

Q No. 3

- a) Consider trying to solve the 8-puzzla using hill climbing. Can you find a heuristic function that makes this work? Make sure it works on the following example:

1	2	3
8	5	6
4	7	

1	2	3
4	5	6
7	8	

[5]

Q No. 4

- a) Show that how means-ends analysis could be used to solve the problem of getting from one place to another. Assume that the available operators are walk, drive, take the bus, take a cup, and fly. [5]

- b) Assume the following facts:

- Mohen only likes easy courses.
- Science courses are hard.
- All courses in Humanities are easy.
- HS-301 is a Humanities course.

Use resolution to answer the question, "What course would Mohen Like?"

[5]

END