Name: Sec./B.N.:

Benha University Faculty of Engineering (at Shoubra) **Electrical Engineering Department** M.Sc. (Computer Systems Engineering)

Attempt the following questions.



Quiz 01

Subject: Artificial Intelligence Theories - CES 510

Date: Tue 18/04/2017 **Duration:** 10 minutes

№ of Questions: 2 in 1 page(s) **Total Points:** 10 (10 Marks)

stion a)	Mhat is AI?	(05 pts)
b)	State five applications of AI.	
c)	Define a Rational Agent.	
d)	<u>Define</u> the problem of solving <i>8-puzzle</i> formally.	
e)	Name the algorithm that results from Simulated annealing with $T=0$ at all times.	
stion a)	n 2: Given an architecture with n bits of storage, how many different possible agent programs are there?	(05 pts)
b)	<u>Derive</u> the state space size of the <i>n</i> -queens problem in the "efficient" incremental formulation.	
c)	Derive time and space complexities of <i>Iterative Deepening Search</i> .	
d)	Consider the sensorless version of the erratic vacuum world. <u>Draw</u> the belief-state space reachable initial belief state {1, 2, 3, 4, 5, 6, 7, 8}.	from the
e)	Which of the following are correct? False \vDash True, True \vDash False, (A \land B) \vDash (A \Leftrightarrow B), (A \Leftrightarrow B) \vDash A \lor B.	
	Good Luck	

Dr. Islam ElShaarawy