

Course No: SWEN 5233

Course Title:

Artificial Intelligence

Date: 24/10/2018

No. of Questions: 4

Time: 1 hours

Using Calculator (NO)

Using Dictionary (No)

University of Palestine



First Mid Exam  
Summer semester  
2019/2018  
Total Grade: 15

Instructor Name: Sally Abdullah

Student No.: \_\_\_\_\_

Student Name: \_\_\_\_\_

College Name: \_\_\_\_\_

Section No.: \_\_\_\_\_

Dep. / Specialist: \_\_\_\_\_

**Question 1: Mark true or false**

**( 3.5 marks )**

1. (     ) The goal of AI is to develop computers that can only think and see
2. (     ) AI is based on many disciplines such: Computer Science, Biology, Psychology, Linguistics, Mathematics, engineering.
3. (     ) Humanoid Robots are a clear application of AI
4. (     ) Turing test was designed to examine a system if it think like humans
5. (     ) An agent receives actions from the environment.
6. (     ) Basic kind of agent programs are Reflex agent, Goal based agents, Utility based agents and learning agents
7. (     ) If the next state of the environment is completely determined by the current state and the action executed by the agent, the environment is static.

**Question 2: Choose the correct answer for each of the following ( 3 marks )**

1. ....maps the current percept to an action
  - a) Agent function
  - b) Agent Program
  - c) Agent Architecture
  - d) Agent input
2. The ..... select actions on the basis of the current percept, ignoring the rest of the percept history
  - a) Goal-based agent
  - b) Simple reflex agents
  - c) Model-based reflex agents
  - d) Utility-based agents
3. The simplest environment is:
  - a) Fully observable and deterministic
  - b) Discrete and single-agent
  - c) Continuous and multi agent
  - d) A&B

**Question 3: Complete the following sentences:**

**( 3.5 marks )**

1. The agent perceive the environment through sensors → .....
2. The agent act upon the environment through actuators → .....
3. The agent ..... maps from percept histories to actions
4. Definitions of artificial intelligence can be grouped in four main categories:
  - a. ....
  - b. ....
  - c. ....
  - d. ....

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**Question 4:**

**(5 marks)**

a. for each of the following agents, develop a PEAS description of the task environment

Agent Type	Performance Measure	Environment	Actuators	Sensors
Robot soccer player				
Internet book-shopping agent				

b. for each of the previous agent types, characterize the environment properties

Task Environment	Observable	Deterministic	Episodic	Static	Discrete	Agents
Robot soccer						
Internet book-shopping						

**Good Luck**