



AMERICAN INTERNATIONAL UNIVERSITY-BANGLADESH  
Faculty of Science and Information Technology  
Department of Computer Science  
CSC 4226: Artificial Intelligence and Expert System (Section: All)

NAME:	ID:	SECTION:
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1. Write the definitions of *Agent*, *Agent Function*, *Agent Program*, *Rationality*, *Autonomy*. 5

2. For each of the following activities, give a PEAS description of the task environment and characterize it in terms of the properties of the environment. 3

- Shopping for used AI books on the Internet.
- Knitting a sweater.
- Bidding on an item at an auction.

3. Write the correct answer [*True(T)*/*False(F)*] in the blank space given in right. 7

1	Cognitive Science approach tries to get “Outside” our mind	
2	Thinking rationally represents fact about the world by logic	
3	An agent is anything that can be viewed as perceiving its environment through actuators and acting upon that environment through sensors	
4	The agent function for an artificial agent will be implemented by an agent program.	
5	A system is acting rationally if it does the right thing, given what it knows	
6	Goal based agents describe desirable situation to be achieved.	
7	If an agent’s sensors give it access to the complete state of the environment needed to choose an action, the environment is fully observable.	
8	In a stochastic environment, there are multiple, unpredictable outcomes	
9	In a fully observable, deterministic environment, the agent need to deal with uncertainty	
10	If the next state of the environment is completely determined by the current state and the action executed by the agent, then we can say the environment is strategic.	
11	If the environment is Fully observable, however, then it could appear to be stochastic.	
12	In principle, an agent need not worry about uncertainty in fully observable, deterministic environment	
13	In episodic environment, the choice of action in each episode depends only on episode itself.	
14	In a sequential environment, the agent engages in a series of connected episodes. Where current decision can affect future decisions.	
15	Omniscience agent knows the actual outcome of its actions, and can act accordingly.	

4. What are the four basic types of Agent? Draw schematic diagram for each type of agent. 5