

Victoria University of Bangladesh

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Course Title: Artificial Intelligence

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Ans to the Que NO 1 (A)

AI:- Artificial Intelligence is the simulation of human intelligence process by ~~not~~ machines, especially computer system.

Application of AI: Specific applications of AI include Ex

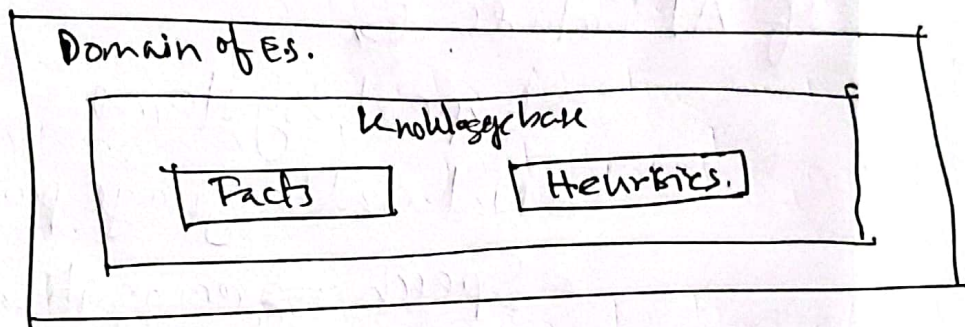
- # Expert systems
- # Natural language processing (NLP)
- # Speech ~~reg~~ recognition
- ~~Not Computer vision~~
- # Machine vision.
- # Robotics
- # Automatic programming.

Ans to the Que NO 1 (B)

NLP: Natural language processing (NLP) is a machine learning technology that gives computers the ability to interpret, manipulate, and ~~comp~~ comprehend human language. Organizations today have large

Volume of voice and text data from various communication channels like email, text message, social media, newsfiled, video, audio and more.

NLP in Expert system: An expert system is a computer program designed to act as an expert in particular domain (area of expertise)



Ans to the Que NO 2 (d)

Difference type of AI: Below are the various type of AI :-

- # purely Reactive
- # Limited Memory
- # Theory of Mind
- # Self-Aware

PJT 0

Foundations of AI :- The foundations of AI is a research area within Georgia Tech's School of Computer Science (CS) that focuses on the development of algorithms that leverage data and statistical tools to solve complex human tasks, to explore novel applications of such tools and better understand the apparent success of AI in practice.

The foundations of AI :-

- # Online Learning
- # Reinforcement Learning
- # System support for distributed ML framework
- # Resource management for distributed ML framework
- # Continual Learning
- # Learning Theory
- # Federated Learning
- # Auto ML
- # Explainable ML
- # System support for heterogeneity-aware ML inference
- # ~~Neural Arch~~
- # Neural Architecture Search (NAS)
- # Neuro-Inspired AI

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Ans to the Que NO: 2(C)

Agents: An agent can be anything that ~~pre~~ perceives its environment through sensors and act upon that environment through actuators. An agent runs in the cycle of perceiving, thinking and acting.

Sensors: - These are devices that detect any changes in the environment. This information is sent to other devices. In AI, the environment of the system is observed by intelligent agents through sensors.

Actuators: - These are components through which energy is converted into motion. They perform the role of controlling and moving system. Examples include rails, motors and gears.

D.T.O

Ans to Tu Que No 3(A)

PEAS:- PEAS system is used to categorize similar agent together. The PEAS system delivers the performance measure with respect to the environment, actuators and sensors of the respective agent. Most of the highest performing agent are Rational Agents. PEAS stands for a performance measure, environment, Actuator, Sensor.

1. Performance Measure:- Performance Measure is the unit to define the success of an agent.
2. Environment:- Environment is the surrounding of an agent at every instant. It keeps changing with time if the agent is set in motion.
3. Actuator:- An Actuator is a part of the agent that delivers the output of Action to the environment.
4. Sensor:- Sensors are the receptive parts of an agent that takes in the input for the agent.

Q.T.O

Answer to Quc NO-3 (B)

Diagram of a Simple reflex agents:

