

1) What do you understand by Cognition? What are the different approaches to it? Write in detail about any one approach.

Cognition:

- The meaning of cognition is "to know".
- It is essentially concerned with the process of discovering knowledge which could be helpful in doing any task.

Approaches to Cognition:

- There are 5 approaches to understand cognition, so far. They are discussed in brief as follows.

1) Biological Approach:

- This is the neuroscience approach to the cognition.
- The cognition is studied as an activity in the brain.
- ~~This~~ The basis of this approach is based on the neurons.

2) Psychological Approach:

- This is an approach taken by a field of psychology called cognitive psychology.
- It is based on the stimulus and response characterization of the human mind.
- The mind is viewed as something which has some default response mechanism with respect to external/internal stimulus and this mechanism changes over time.



3) Linguistic Approach

- This is based on linguistic theory.
- It is concerned with the analysis & generation of the thoughts through natural languages.

4) Artificial Intelligence Approach:

- This approach is based on an attempt to simulate the mind processes on computer chip to understand it.

5) Philosophical Approach:

- It is based on philosophy.
- This is concerned with the nature of mind & body and the relationship between them.

2) Write and compare different types of Mind-body theories in your own words.

- The mind-body theories are those that are concerned with the relationship between mind and body.
- First, we will look into 2 definitions (or an attempt to define mind) of mind as given in Oxford English Dictionary.

1) 1st Definition of Mind:

- Mind is defined as some mental or psychical being or faculty.
- It is (or it contains) the set of a person's consciousness, thoughts, volitions and feelings.
- This also contains all the cognitive phenomena that makes the person different from some other person. This includes the incorporeal subject of psychical being and the spiritual part of human being.

2) 2nd Definition of Mind:

- In another definition of OED, the mind is defined as the cognitive or intellectual powers of a person which are different from the free will & emotions of that person.
- The intelligence & cognition is associated with the ~~mind~~ ~~head~~ here and the free will & emotions are associated with the heart.
- This definition describes the mind as something which is rational & deliberate.

Different theories of mind-body:

- The theories which are concerned with the relationship between mind & body comes under the "Dualist" theories of mind.
- There are many theories which try to explain the duality of mind-body. Some of which are as follows:

1) Interactionists:

- This theory claims that the people supporting this theory claims that the mind affects the body & body affects the mind as well.

2) Cartesian Duality:

- This theory postulates both the mind & body as substance.
- One extended & material, while the other is associated with spiritual and unextended.

3) Parallel Duality:

- This theory claims that the mind & body run in parallel & they don't have anything to do with another.

4) Epiphenomenalist view:

- This theory claims that the body affects the mind but the converse is not true.

5) What do you understand by

- Plasticity or brain's ability to form new connections that remain the same even after injury in brain.
- For ex. there is a case where a person's leg gets stronger although the work is not done.
- If the area of the brain that controls the leg gets damaged, it although the work is not done, the leg gets stronger.

5) What do you understand by Brown's plasticity?

- Plasticity or Brain Plasticity is the ability of the brain to form new connections or to modify existing ones.
- This ability is very essential as without this ability, the connections that a human had in its infant form will remain the same and it won't be possible to learn anything new.
- This ability is also helpful when ~~the~~ a person gets some injury in brain or due to some other causes, the development of the brain connections ~~will~~ could not be formed.
- For ex. there are different areas of brain which are related to do ~~the~~ some particular task. If the area which is responsible for controlling the right leg gets some damage then it won't be possible to move it although it will be possible to sense it as the sensing work is carried out by some different region.