

Q.2. What do you understand by animal behaviour ? Summarise different types of animal behaviour. Differentiate between stereotyped and individual behaviours.

What is behaviour ? Explain with suitable examples the various types of behaviours in animals. (Allah. 1993; Meerut 90, 91)

Animal Behaviour

Animal behaviour can be defined as a response of an organism or a group of organisms to a stimulus or to some stimuli.

Types of Behaviour

Behavioural patterns in animals develop as adaptive response and range from simple, brief and stereotyped acts to complex and highly variable acts. A behaviour initially develops in response to stimulus. A stimulus-bound behaviour is modified during the life time of an individual in response to the surroundings. The different behavioural patterns can be separated into two major types :

1. **Stereotyped behaviours** characteristics of the group.
2. **Individual or acquired behaviours** characteristics of individual.

1. Stereotyped Behaviour

In stereotype behaviour the same pattern of behaviour is repeated again and again. The organism is **stimulus bound** *i.e.* a pattern of stimuli triggers a definite sequence of predictable response. The stereotype behaviour never varies within a species. It remains the same from individual to individual or from generation to generation. It means the stereotyped acts become fixed in the individuals and in the populations and become outcome of the inherited properties of nervous system. Therefore, the stereotyped behaviours are called **innate** or **inborn** or **inherent behaviour**. These behaviour patterns are described as **fixed action patterns (FAPs)** and are inherited through genes.

Stereotyped behaviour includes **taxis, kinesis, simple reflexes and instincts**. Some ethologists call these behaviours as **species characteristic behaviour** instead of instinctive or innate behaviour.

2. Individual Behaviour or Learned Behaviour or Acquired Behaviour

These behaviour patterns are displayed by individual organisms for acquiring food, water, energy; oxygen, homeostasis, reproduction, social status and for the harmony within the environment.

The modes of individual behaviours are :

1. Exploitation
2. Conflict
3. Aggression
4. Fear
5. Avoidance
6. Communication
7. Feeding and drinking (ingestive)
8. Sleeping
9. Locomotion
10. Movement
11. Play
12. Social behaviour.

The stereotyped behaviour patterns are also classified as **simple and complex**.

1. **Simple stereotyped behaviours** : These include simple movements of the whole body of the animals. **Taxes and kinesis** i.e. orientation of an animal in respect to some aspect of its environment are simple stereotyped behaviour. These and the rate of change of direction or speed of locomotion are found in simple animals and help them in finding food, shelter and mate for reproduction.

2. **Complex stereotyped behaviours** : These involve complex stimuli and a more complex behavioural response, in which only a part or some parts of the animal's body are involved. **Innate, learned and ritualised** behaviours are examples of complex stereotyped behaviour. These arise due to changes occurring during ontogeny.

Q. 3. Define behaviour. Differentiate between innate and acquired behaviours. Give suitable examples. (Luck. 1993; Kanpur 96, 97; Allah. 93)

Behaviour

Hint : Refer Q. 1.

TABLE 2 : DIFFERENCES BETWEEN INNATE AND ACQUIRED BEHAVIOUR

	Innate Behaviour	Learned or Acquired Behaviour
1.	Innate behaviour is inborn, inflexible and unlearned.	Acquired behaviour includes those behaviour patterns that develop by learning or experience.
2.	Innate behaviour patterns are genetically determined.	Only the ability to learn is inherited and not the behaviour pattern.
3.	The entire body participates in innate or instinctive behaviour.	Only specific organ or part or parts of body elicit the behaviour.
4.	Instinctive behaviour includes reflexes or reflex action, fixed action pattern and modifiable action pattern.	Learned behaviour or acquired behaviour includes habituation, associative learning, latent learning, reasoning and imprinting.

<p>5. Examples :</p> <p>(i) Nest building in spider or birds is an instinctive behaviour. A spider spins a web which is characteristic of its species even though it is never before exposed to that pattern. This shows instinct or innate behaviour is inherited.</p> <p>(ii) The tropical army ants have a tendency to remain close to one another following the pheromone laid by the lead ants. Their entire colony moves over the jungle floor. Sometimes, the lead ants begin to move away from the swarm but because of their tendency to remain in group, these start following a circular path. Other ants also follow the trail and the entire swarm marches round and round in a circle. This is blind and instinctive behaviour and the behaviour is inflexible.</p> <p>(iii) —</p>	<p>Examples :</p> <p>(i) A young puppy of 3–4 weeks age will suddenly lift its ears and draws back from any loud and sudden noise. But, if such noise is repeated without causing harm to the puppy, it will respond less and less violently and finally will not show any reaction. It is an example of habituation.</p> <p>(ii) Trial and error behaviour is an example of associative learning. A young toad may strike at all flying insects, some of which may have disagreeable taste. By trial and error the adult toad is able to discriminate between edible and inedible insects.</p> <p>(iii) Reasoning is highest type of acquired behaviour. By applying previous learning experience the animal responds correctly to a new situation through a mental process without any trial and error.</p>
---	--