



**Leaving Cert Agricultural  
Science**

**Free Notes**

**The Immune System**



### The immune System:

#### Q) Discuss the mechanisms of the structure of the immune system in animals.

- + The following are defence mechanisms in mammals against pathogens (disease causing organisms):
- + **The Skin**- It is a physical barrier that stops pathogens.
- + **Clotting**- If the skin is broken the blood clot stops entry of pathogens.
- + **Mucous membranes**- These secrete mucus which lines many body parts. The mucus traps pathogens and prevents them from entering the body.
- + **Nasal hairs**- These remove suspended micro-organisms from the air.
- + **Cilia**- These small hairs beat to force mucus to the pharynx for swallowing to the stomach. Coughing helps in this process.
- + **Hydrochloric acid**- This is found in the stomach. It kills micro-organisms.

#### Q) Distinguish between active and passive immunity

Active Immunity	Passive Immunity
<ul style="list-style-type: none"> <li>+ This type of immunity comes about over a long time.</li> <li>+ It is required from suffering an illness and the body produces antibodies (B &amp; T cells) to fight the infection.</li> <li>+ Vaccination also introduces harmless form of disease and the animal produces antibodies to fight illness, explains why animals tend not to suffer from that illness ever.</li> </ul>	<ul style="list-style-type: none"> <li>+ Short term immunity</li> <li>+ Antibodies produced by mother and passed onto lamb/calf via suckling.</li> <li>+ Antibodies injected also.</li> <li>+ Colostrum also provides short term immunity.</li> </ul>

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