

- 1) sig contri.
- 2) LP → science of microbiology
- 3) Germ Theory of Disease → disproved spontaneous generation.

- 4) RK → particular microorg cause particular dis.
Outline postulates
+ expt.

Question 27 (8 marks)

Marks

value judgement

Evaluate the contributions made by both Louis Pasteur and Robert Koch to our present understanding of the causes and possible prevention of infectious diseases.

8

Louis Pasteur and Robert Koch both scientists have made significant contributions to our present understanding of the causes and possible prevention of infectious diseases.

Louis Pasteur outlined the science of microbiology. He disproved spontaneous generation and outlined the Germ Theory of Disease which stated that microorganisms are the cause of diseases. By conducting his swan flask experiment, he outlined that spores from the air carry spores which can cause disease. This is shown through boiling broth in an S swan neck flask whereby the spores and dust particles were caught in the bend of the flask so not contaminating the broth showing that spores are carried in the air and can cause disease.

Robert Koch, a country physician contributed to our understanding that particular microorganisms cause and are responsible for particular diseases. By studying mice, he outlined his postulates which are the criteria for understanding how microorganisms contribute to causing a particular disease. Firstly, by studying mice, he realised that in order to cause a disease a microorganism must be present in the host. Then, he isolated the microorganism causing the disease from the host and cultured it. He then inoculated the mice with the microorganism into a second host and realised that the same symptoms that were present in the healthy host were present in the second host. The microorganism was isolated from the second host and realised that it was the cause of the disease present in the healthy host. Therefore, the contributions made by Louis

Pasteur and Robert Koch have developed our understanding of the causes and possible prevention of infectious diseases.