

Question 27 (8 marks)

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

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Louis Pasteur, through his famous 'Swan-neck Flask' experiment demonstrated that the previously held view, that organisms such as bacteria can spontaneously generate, was not true, proving that a substance must be exposed to pathogens in order to become infected. Pasteur also discovered that the heating of products such as milk, removed any pathogens that were present, removing the potential for infection from the consumption of such products through the method Pasteurisation. This contribution of the development of vaccines for the disease anthrax, through the identification of the pathogen, aided in the prevention of other diseases such as smallpox through the development of vaccinations to acquire immunity. Robert Koch, through the development of methods to identify pathogens that cause disease outlined in his postulates, contributed to our understanding of the causes of disease, and through the identification of the cause, such as bacteria, the use of methods that could be used to prevent infection from such pathogens. The contributions of both Pasteur & Koch have led to our increased understanding of the causes of disease, and therefore possible prevention methods, such as the prevention of contamination & Pasteurisation, to reduce the impact of infectious diseases - those that can be transmitted.