**Question 3**

**Answers**

1. Malthus proposed two societal changes to avoid the doom-and-gloom outcome he was predicting:

* Moral restraint:

He believed that people should exercise self-restraint in terms of having fewer children, especially when resources were scarce.

* Positive checks:

Malthus believed that natural disasters, famine, disease, and war were necessary to control population growth and prevent the overshoot of resources. He suggested that such "positive checks" were inevitable and should not be prevented.

1. Malthus's predictions did not occur due to a variety of factors, including technological advancements, the development of new agricultural techniques, and the expansion of trade and transportation networks. These factors allowed for an increase in food production and the efficient distribution of resources, which helped to keep pace with the growing population.
2. Malthus's theory and the logistic growth model share some similarities in their focus on population growth and limiting factors. Both models acknowledge that population growth is limited by available resources and that there is a carrying capacity beyond which growth cannot continue. However, the logistic growth model is more sophisticated and takes into account factors such as competition for resources, carrying capacity, and feedback mechanisms that can limit growth. Malthus's theory, on the other hand, is based on a simpler linear model that does not account for these complexities.