### **Question 1: DevOps Necessity and Benefits (20 Marks)**

**a. Key Benefits of DevOps** (20 Marks)

* **Faster Delivery:** Speeds up software release cycles.
* **Improved Collaboration:** Bridges the gap between development and operations teams.
* **Higher Quality:** Enables continuous testing and integration, reducing defects.
* **Enhanced Stability:** Improves system reliability and uptime.