Gloria

You must be able to explain some specifics about this infrastructure:

a) **For every additional element, why you are adding it?** Adding a server, load balancer and application server enhance reliability, handle increased traffic, and provide scalability.
b) **What distribution algorithm your load balancer is configured with and how it works?** It is configured using Round Robin algorithm to evenly distribute the incoming requests among the servers.
c) **Is your load-balancer enabling an Active-Active or Active-Passive setup, explain the difference between both?** An Active-Active setup is where both servers handle incoming requests whereas an Active-Passive setup is where one server is handling incoming requests as the other one remains on standby. In the infrastructure, the load balancer enables an Active-Active setup.
d) **How a database Primary-Replica (Master-Slave) cluster works?** In this model, there is a primary node (Master), and one or more secondary nodes (Slaves). The Master does the write. read and update operations. The slaves can only do the read operations. Therefore, it is implemented for fault tolerance.
e) **What is the difference between the Primary node and the Replica node in regard to the application?** The primary node handles write and update operations, while the replica nodes serve read operations.

You must be able to explain what the issues are with this infrastructure:

a) **Where are SPOF –** having one load balancer makes it prone to SPOF
b) **Security issues (no firewall, no HTTPS) –** it lacks a firewall leaving it to be vulnerable to unauthorized access. Absence of https poses a risk to expose data that is in transit.
c) **No monitoring –** this makes it hard to identify potential issues and monitor performance.