Theoretical Answer :

1.

a.

Spring encounters an error because of a circular dependency in the configuration. Specifically, CustomerService is configured to receive EmailService through constructor injection. Conversely, EmailService is also configured to receive CustomerService through constructor injection. This mutual dependency creates a circular reference: CustomerService needs EmailService to be instantiated, while EmailService needs CustomerService to be instantiated. As a result, Spring cannot resolve the dependencies and throws an error.

b.

In Spring Boot, an init() method is used to perform initialization tasks after bean creation. It helps with resource setup, custom configuration, and ensures all dependencies are properly initialized. You can define it using the @PostConstruct annotation, by implementing the InitializingBean interface, or via the @Bean(initMethod = "init") configuration in a @Configuration class.

Question No. 5

The correct numbers are:

- **a**
- **c**
- **e**
- **i**