

GUJARAT TECHNOLOGICAL UNIVERSITY**MCA - SEMESTER- V EXAMINATION – WINTER 2019****Subject Code: 4659305****Date: 16/11/2019****Subject Name: Application Development using SPRING****Time: 10:30 AM TO 01:00 PM****Total Marks: 70****Instructions:**

1. Attempt all questions.
2. Make suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.

- Q.1 (a)** State whether the following statements are true or false. Justify yours answer. **07**
1. JSR-304 bean validation has become the validation standard in the Java world.
 2. Configuration file name which is utilized as a part of spring boot ventures is known as application. Properties.
 3. Maven is the build tool.
 4. POM stands for Project Oriented Model.
 5. Reactive programming is simply to program using, and relying on, events instead of the order of lines in the code.
 6. Filters conditionally allow messages to pass through the flow based on some criteria.
 7. Spring supports JMS through a template-based abstraction known as JmsTemplate.
- (b)**
1. What is spring boot initializr? **03**
 2. What is LDAP? **02**
 3. What is CSRF? **02**
- Q.2 (a)** Explain the Spring Project Structure in detail. **07**
- (b)** What is JPA? Explain architecture of JPA with example. **07**
- OR**
- (b)** What is JDBCTemplate? Explain with example. **07**
- Q.3 (a)** Explain spring environment abstraction for auto configuration. **07**
- (b)** What is HATEOAS? What is the need of HATEOAS? Explain with example. **07**
- OR**
- Q.3 (a)** What is REST API? How to write restful controllers in spring? **07**
- (b)** What is profile? How can we set profile specific properties in spring? **07**
- Q.4 (a)** What is JMS? What is the requirement of JMS? Explain messaging domain in detail. **07**
- (b)** How to create an email integration flow in spring boot? **07**
- OR**
- Q.4 (a)** What is integration flow? Which type of component used in integration flow? **07**
- (b)** What is RabbitMQ? How to send and receive a message using RabbitMQ? **07**
- Q.5 (a)** Explain the diagramming reactive flows through marble diagram in detail **07**
- (b)** What is Cassandra? Explain Cassandra data modeling in detail. **07**
- OR**
- Q.5 (a)** What is spring WebFlux? Explain with event loop diagram in detail. **07**
- (b)** What is MongoDB? How to store and retrieves data from MongoDB? **07**