

POKHARA UNIVERSITY

Level: Bachelor Semester: Fall Year : 2018
 Programme: BE Full Marks: 100
 Course: Enterprise Application Development Pass Marks: 45
 Time : 3hrs.

Candidates are required to give their answers in their own words as far as practicable.

The figures in the margin indicate full marks.

Attempt all the questions.

1. a) What is MVC pattern and why it should follow? Describe MVC Structure for J2EE with appropriate Diagram. 7
- b) What is SOA? How XML binding in java can be achieved? 8
2. a) What is the fundamental difference between JSON and XML? What is the biggest advantage of using web services? 7
- b) Represent following XML data in JSON Format? 8

```
<?xml version="1.0" encoding="UTF-8" ?>
<order id="1234" date="05/06/2013">
  <customer first_name="James" last_name="Rorrison">
    <email>j.rorri@me.com</email>
    <phoneNumber>+44 1234 1234</phoneNumber>
  </customer>
  <content>
    <order_line item="H2G2" quantity="1">
      <unit_price>23.5</unit_price>
    </order_line>
    <order_line item="Harry Potter" quantity="2">
      <unit_price>34.99</unit_price>
    </order_line>
  </content>
  <credit_card number="1357" expiry_date="10/13"
  control_number="234" type="Visa"/>
</order>
```

3. a) What is UML Diagram? Describe any one structural UML Diagram with example. 8
- b) What is Grey-Box Testing? Describe about the Level of Testing. 7
4. a) Write short notes on Lazy initialization. Differentiate between Factory pattern and Singleton pattern. 7
- b) Explain Layered Architecture for Web Application. What are the design considerations of developing good web applications? 8
5. a) What are the exact practical uses of VCS? Explain giving an example of real practical problem, a developer can solve through it. 7
- b) What is SQL Injection? How it can be achieve? Describe about the prevention ideas. 8
6. a) What is Agile Testing and how is it different to traditional waterfall or the V model? 8
- b) What are the differences between SOAP and RESTful web services? What is payload in RESTful? 7
7. Write short notes on: (Any two) 2x5
 - a) Differentiate between Convention and Configuration
 - b) Dependency injection
 - c) Test Driven methodology