TECHNICAL UNIVERISTY OF MOMBASA

Faculty of Engineering & Technology

DEPARTMENT OF COMPUTER SCIENCE & INFORMATION TECHNOLOGY

UNIVERSITY EXAMINATIONS FOR DEGREE IN:
BACHELOR OF TECHNOLOGY IN INFORMATION TECHNOLOGY
(BTIT 12S J-FT)

EIT 4310: ADVANCED WEB BASED APPLICATION PROGRAMMING

END OF SEMESTER EXAMINATION
SERIES: APRIL 2015
TIME: 2 HOURS

Question One (Compulsory)

a) Briefly explain the terms as used in web application:
  (i) Web container
  (ii) Ejb container
  (iii) Persistent unit   **(6 marks)**

b) Explain TWO types of persistence that can be used by entity class   **(4 marks)**

c) Explain any types of methods that are used with entity class to manipulate object data **(4 marks)**

d) State the meaning of the following annotation as used in entity class   **(6 marks)**
  (i) @Ejb
  (ii) @Column
  (iii) @Stateless

e) Distinguish between the following terms as used in web application programming: **(10 marks)**
    (i) Web application architecture
    (ii) Web server
    (iii) Web tier
    (iv)Web client
    (v) Web application

Question Two

a) Explain various strategies for generating the primary key values of an entity class **(6 marks)**

b) Design an entity class called patient with two data members: pid and pname where pid is the primary key include all the getter and setter method. Use persistence properties **(14 marks)**

Question Three

a) Explain the following web technologies:
    (i) Servlet
    (ii) Java server pages
    (iii) Applet
    (iv) Entity javabeans
    (v) Netbeans **(10 marks)**

b) Writ a java server page that picks the data from the HTML code below and stores in a session bean called Hellobean with two data members, name and email

```
HTML Code
<html>
<head><title><hello</title></head>
<body>
<h3>Enter your name and email address: <h3>
<form method = "get" action = "hello.jsp">
<p><input type = "text" name ="name" value = "size=" 20"/>Name</p>
<p><input type="text"name="email" value=""size = "20"/>email<p/>
<p><input type = "subunit" name = "send"value ="send"/> </p>
</form>
</body> </html>
```
(10 marks)

Question Four

a) Briefly distinguish the following as used in web programming:
    (i) Stateless bean
    (ii) Stateful bean
    (iii) Message bean **(6 marks)**

b) Write a savlet that picks the data from a session bean called Hellobean with two data members, name and email and echos the data on the server **(14 marks)**

Question Five

a) Briefly explain the meaning of the following Java technologies **(6 marks)**

b) Explain the J2EE platform architecture for web application programming **(8 marks)**

c) Define the term IDE as used in software development and outline any FOUR examples of IDE used for web application programming **(6 marks)**