(Knowledge for Development)

KIBABII UNIVERSITY

(KIBU)

UNIVERSITY EXAMINATIONS
2022/2023 ACADEMIC YEAR

END OF SEMESTER EXAMINATIONS
YEAR FOUR SEMESTER ONE EXAMINATIONS

FOR THE DEGREE OF BACHELORS OF SCIENCE
(INFORMATION TECHNOLOGY)

COURSE CODE: BIT 416

COURSE TITLE: ENTERPRISE APPLICATION

DEVELOPMENT

DATE: 19/04/2023   TIME: 2.00 P.M. - 4.00 P.M.   2HRS

INSTRUCTIONS TO CANDIDATES
ANSWER QUESTIONS ONE AND ANY OTHER TWO

QUESTION ONE (COMPULSORY) [30 MARKS]

a. Give two characteristics of each of the following java Editions

    i) J2SE   ii) J2EE   **(4mks)**

b. With an aid of a diagram briefly describe the following java environments

    i) JVM   **(3mks)**

    ii) JDK   **(3mks)**

c. i) Outline any three features of Java   **(3mks)**

   ii) Give any three types of java applications   **(3mks)**

d. i) Outline three characteristics of a java beans.   **(3mks)**

   ii) Explain two functions of COBRAs Object Adapter   **(3mks)**

e. Differentiate between a centralized and a distributed system **(4mks)**

f. Using a well labeled diagram differentiate between a fat and thin client **(4mks)**

QUESTION TWO [20 MARKS]

a. Using well labeled diagrams explain the following distributed architectural models

    i)   cient server   **(3mks)**

    ii)   object based   **(3mks)**

b. Explain any three types of ERP architectures   **(6mks)**

c. Using a diagram, give a brief explanation of RMI components architecture   **(8mks)**

QUESTION THREE [20 MARKS]

```
Package model;
public class EmployeeBean implements Serializable{
Private string firstName;
Private string lastName;

public EmployeeBean() {

}
Public EmployeeBean(String firstName, String lastName){
This.firstname=firstName;
This.lastname=lastName;
}
}
```

a. Use the java code snippet that implements use of java beans above to answer the following questions;

i. write a accessor code method for firstname property (3mks)

ii. Write a mutator code method for lastname property (3mks)

b. Explain the six steps to be carried out when connecting a java program application to a database using JDB (6mks)

c. Using a well labeled diagram, describe the COBRA architecture standard (8mks)

QUESTION FOUR [20 MARKS]

```
public class myJDBC{
public static void main(string [] args){
Connection connection=DriverManager.getConnection("jdbc:mysql://localhost:3306");
Statement statement=connection.createStatement();
Resultset resultset=statrement.executeQuery("select *from table");
While(resultset.next()){
System.out.println(resultset.getstring(""));
}
}
}
```

a. Using the java code snippet that implements use JDBC above ,Write a code to import the missing class libraries (4mks)

b. Outline any six common characteristics of a distributed systems (6mks)

c. With aid of a diagram, briefly explain the four J2EE architecture container types (10mks)

QUESTION FIVE [20 MARKS]

a. State any four characteristics of HTTP protocol (4mks)

b. Explain any two types of ERP modules (4mks)

c. Using a diagram briefly explain the 3-tier distributed architecture (6mks)

d. Write an SQL statement that performs the following activities

i)Create a database called employees and Create a table called registration with the following fields setting approprite data types:

EmpNo,firstname,lastname,age,address,phoneno. (3mks)

ii) Enter one employee record in the database (3mks)