



MACHAKOS UNIVERSITY

University Examinations for 2016/2017

SCHOOL OF ENGINEERING AND TECHNOLOGY

DEPARTMENT OF COMPUTING AND INFORMATION TECHNOLOGY

THIRD YEAR FIRST SEMESTER EXAMINATION FOR
BACHELOR OF SCIENCE (INFORMATION TECHNOLOGY)

SIT 300: COMPONENT PROGRAMMING

DATE: 24/7/2017

TIME: 11:00 – 1:00 PM

INSTRUCTIONS

Answer Question One and Any Other Two Questions.

QUESTION ONE (30 MARKS)

- a) Explain Software Components in reference to component programming technology. (3 marks)
- b) Explain two characteristics of an object in component programming. (3 marks)
- c) Using a diagram explain the elements of a component model. (3 marks)
- d) Explain the two categories of component model services. (3 marks)
- e) Explain the role of Interface in component model services. (2 marks)
- f) Explain two types of interfaces in component model services. (3 marks)
- g) Explain two Properties of Interfaces in component model services. (2 marks)
- h) Explain Interface serves as contract in component technology. (3 marks)
- i) Differentiate between objects and components. (3 marks)
- j) Explain two Characteristics of a component. (2 marks)
- k) Explain the Benefits of software components. (2 marks)
- l) Enumerate two advantages of a component. (2 marks)

QUESTION TWO (20 MARKS)

- a) Discuss the benefits of java programming with Common Object Request Broker Architecture (CORBA). (5 marks)
- b) With the help of diagram briefly discuss the architecture and components of Common Object Request Broker Architecture (CORBA). (5 marks)
- c) Explain five characteristics of COM components. (5 marks)

QUESTION THREE (20 MARKS)

- a) Using a diagram explain the Web Services architecture. (3 marks)
- b) Explain two Components of Web Services. (2 marks)
- c) Explain using example how does a web service work. (4 marks)
- d) Describe two benefits of using Web Services. (2 marks)
- e) Explain three special behavioral characteristics of web services. (3 marks)
- f) Explain two ways to view the web service architecture. (4 marks)
- g) Explain two web Services components. (2 marks)

QUESTION FOUR (20 MARKS)

- a) What is Java Beans? Describe the significance of Java beans components executed in any environment. (3 marks)
- b) Explain three elements of a JavaBean. (3 marks)
- c) Describe three Features of JavaBeans in component based technology. (3 marks)
- d) Explain three Types of Java Beans. (3 marks)
- e) Explain three development phases of JavaBeans. (3 marks)
- f) Enumerate the Steps of creating Java Bean in component based technology. (5 marks)

QUESTION FIVE (20 MARKS)

- a) What is Enterprise Java Bean? Describe three types of Enterprise Beans. (8 marks)
- b) Explain three Component of Enterprise JavaBeans Architecture. (6 marks)
- c) Differentiate between Java Beans and Enterprise Java Beans. (6 marks)