

**W1-2-60-1-6**

**JOMO KENYATTA UNIVERSITY OF AGRICULTURE AND TECHNOLOGY**

**UNIVERSITY EXAMINATIONS 2015/2016**

**YEAR II SEMESTER II EXAMINATION FOR THE DEGREE OF BACHELOR OF INFORMATION TECHNOLOGY**

**BIT 2225: CLOUD COMPUTING**

**DATE:DECEMBER 2015 TIME: 2 HOURS**

**INSRUCTIONS:** Answer question one and any other two questions.

QUESTION ONE (30 MARKS)

a. Explain the characteristics of a cloud computing environment. (4 marks)

b. Briefly explain the following technologies in cloud computing.

 i. Server virtualization. (2 marks)

 ii. Parallel processing. (2 marks)

 iii. Vector processing. (2 marks)

c. Outline some of advanced unified communications features of standard Caas deployement. (3 marks)

d. Describe what is openness in cloud computing. (3 marks)

e. Discuss some of the cloud computing challenges. (5 marks)

f. Explain the chief benefits of using infrastructure as –a-service. (5 marks)

g. Describe how service oriented architecture (SOA) can be viewed at high level as a step towards cloud computing. (5 marks)

QUESTION TWO (20 MARKS)

a. A company needs to provide IT services to a worldwide customer base utilizing a diverse set of devices. Which advantages of cloud computing can help the company deliver such services? (6 marks)

b. Discuss the aspects of security that are uniquely designed to be optimized for delivery as a web based service. (6 marks)

c. According to Microsoft, Saas, architectures can be classified into four maturity levels. State and explain the maturity levels. (8 marks)

QUESTION THREE (20 MARKS)

a. Multitenancy enables sharing of resources and costs among large pool of users. Outline the benefits of multinenancy. (6 marks)

b. Briefly explain the following web services delivered from the cloud.

 i. Communication – as-a service (Caas) (3 marks)

 ii. Software-as-a service (Saas) (3 marks)

 iii. Platforms –as-a service. (paas) (3 marks)

c. State and explain the common standards currently used in cloud environments.

 (5 marks)

QUESTION FOUR (20 MARKS)

a. Differentiate the following end-user access to cloud computing.

 i. YouTube (3 marks)

 ii. Facebook. (3 marks)

 iii. DimDim (3 marks)

b. Discuss why the adoption of monitoring - as-a service in an organization is important.

 (5 marks)

c. Discuss the common open source models in cloud computing. (6 marks)