



(Knowledge for Development)

KIBABII UNIVERSITY

**UNIVERSITY EXAMINATIONS
2016/2017 ACADEMIC YEAR**

**SPECIAL EXAMINATIONS
YEAR ONE EXAMINATIONS**

**FOR THE DEGREE OF
MASTER OF SCIENCE IN
INFORMATION TECHNOLOGY**

COURSE CODE : MIT 820

**COURSE TITLE : ARCHITECTURES FOR
SOFTWARE SYSTEMS & EMERGING ISSUES**

DATE: 30/09/2017 TIME: 8.00A.M. – 10.00A.M.

INSTRUCTIONS TO CANDIDATES

ANSWER QUESTIONS ONE AND ANY OTHER TWO.

QUESTION ONE (COMPULSORY QUESTION) (30 MARKS)

- a) Distinguish between Software Architecture and Systems Architecture. (10 Marks)
- b) Discuss the role(s) of Software Architecture to the Software Development Process. (10 Marks)
- c) Discuss the challenges of designing software architecture for complex systems. (10 Marks)

QUESTION TWO (20 MARKS)

- a) Enumerate on the key stages of the evolution of Software Architecture as a discipline. (10 Marks)
- b) What is the current state of practice of Software Architecture? (10 Marks)

QUESTION THREE (20 MARKS)

- a) Why is software architecture evaluation such an important discipline? (5 Marks)
- b) Explain distinct approaches and tools that are used to designing and evaluating software architectures for emerging technologies. (15 Marks)

QUESTION FOUR (20 MARKS)

Explain the major software architectural styles and patterns [11]
[5EP]

QUESTION FIVE (20 MARKS)

Discuss software architecture and quality requirements of a software system.