

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

**JOMO KENYATTA UNIVERSITY**

**OF**

**AGRICULTURE AND TECHNOLOGY**

**UNIVERSITY EXAMINATIONS 2015/2016**

**FOURTH YEAR SECOND SEMESTER EXAMINATION FOR THE**

**DEGREE OF BACHELOR OF SCIENCE IN BIOTECHNLOLOGY**

 **SBT 2443: GENETIC ENGINEERING II**

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

**INSTRUCTIONS: ANSWER QUESTION ONE (COMPULSORY) AND ANY OTHER TWO QUESTIONS**

**QUESTION ONE**

1. Briefly describe mechanisms that support organism’s evolution. [6 marks]
2. Give an account on various enzymatic advancement sequencing

 approaches. [6 marks]

1. List social concerns in regard to genetic engineering of organisms. [4 marks]
2. Highlight the importance of studying human genetics. [5 marks]
3. Define the following terms:
4. Pharmacogenomics [2 marks]
5. Northern blotthing [2 marks]
6. Biopharming [2 marks]
7. Outline the applications of fluorescent in-situ hybridization (FISH).[3 marks]

**QUESTION TWO**

Discuss somatic hybridization. [20 marks]

**QUESTION THREE**

Discuss achievements and risks associated with genetic engineering. [20 marks]

**QUESTION FOUR**

Discuss production of recombinant human insulin. [20 marks]