



**TECHNICAL UNIVERSITY OF MOMBASA**  
**FACULTY OF APPLIED AND HEALTH SCIENCES**  
**DEPARTMENT OF PURE & APPLIED SCIENCES**

**UNIVERSITY EXAMINATION FOR:**  
**BTIMB**

**ABT4403 : THERAPEUTIC PROTEINS**  
**END OF SEMESTER EXAMINATION**

**SERIES: APRIL 2016**

**TIME: 2 HOURS**

**DATE: Pick Date May 2016**

**Instructions to Candidates**

You should have the following for this examination

*Answer Booklet, examination pass and student ID*

This paper consists of **FIVE** questions. Attempt question ONE (Compulsory) and any other TWO questions.

**Do not write on the question paper.**

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**Question ONE**

- a. Identify the amino acid and position of disulfide bridges in insulin (5 marks)
- b. List five structural domains and state their function in tPA (5 marks)
- c. List five advantages of BVES (5 marks)
- d. Describe the structure of erythropoietin (5marks)
- e. Differentiate between the following;
  - i. Inhibin and activin (5 marks)
  - ii. Physiological and pharmacological dosage of GnRH (5 marks)

**Question TWO**

Describe the following;

- a. IFN- $\alpha$  (10 marks)
- b. IFN- $\gamma$  (10 marks)

### **Question THREE**

Outline the:

- a. production of follitropin Alfa (10 marks)
- b. control of HGH production (10 marks)

### **Question FOUR**

Describe four debriding agents (20 marks)

### **Question FIVE**

Explain the production of recombinant urate oxidase (20 marks)