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# **UNIVERSITY OF KABIANGA**

## **UNIVERSITY EXAMINATIONS 2016/2017 ACADEMIC YEAR SUPPLEMENTARY/SPECIAL EXAMINATION**

### **FOR THE DEGREE OF BACHELOR OF SCIENCE IN BIOCHEMISTRY**

**COURSE CODE: BIO 311**

**COURSE TITLE: BIOCHEMISTRY OF NUCLEIC ACIDS**

**DATE: 11<sup>TH</sup> SEPTEMBER, 2017**

**TIME: 3.00 P.M - 6.00 P.M.**

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### **INSTRUCTIONS TO CANDIDATES**

- SEE INSIDE

THIS PAPER CONSISTS OF (2) PRINTED PAGES

PLEASE TURN OVER

**UNIVERSITY OF KABIANGA**  
**UNIVERSITY EXAMINATION**  
**FIRST SEMESTER, 2016/2017 ACADEMIC YEAR**

**THIRD YEAR SUPPLEMENTARY EXAMINATION FOR THE DEGREE OF**  
**BACHELOR OF SCIENCE BIOCHEMISTRY AND MICROBIOLOGY**

**BIO 311: BIOCHEMISTRY OF NUCLEIC ACIDS**

**SECTION A (40mks)**

**TIME: 3 Hours**

**INSTRUCTIONS: ANSWER ALL QUESTIONS**

1. Write short notes on Nucleosomes and the 30 nm Fiber (8mks)
2. Briefly describe the regulatory Control of Purine Biosynthesis (8mks)
3. Write short notes on Posttranslational Modification of proteins (8mks)
4. Briefly describe the strand Directed Mismatch Repair System in removal of replication errors (8mks)
5. a. What are point mutations (3mks)  
b. Briefly explain types of point mutations (5mks)

**SECTION B: Choose ANY TWO questions (30mks)**

6. Describe the two classes of DNA recombination and state its biological function (15mks)
7. Describe in details DNA-directed synthesis of RNA and Post Termination of the RNA (15mks)
8. Describe processes by which Bacteria transfer genetic information (15mks)