

CHUKA



UNIVERSITY

**UNIVERSITY EXAMINATIONS
RESIT/SPECIAL EXAMINATION**

**EXAMINATION FOR THE AWARD OF DEGREE OF BACHELOR OF SCIENCE IN
BIOCHEMISTRY**

BIOC 452: DNA TECHNOLOGY

STREAMS: BSC (BIOC)

TIME: 2 HOURS

DAY/DATE: TUESDAY 02/02/2021

8.30 A.M – 10.30 A.M.

INSTRUCTIONS:

- *Answer question ALL questions*

QUESTION ONE(30 marks)

- a) (i) Define an adaptor. (2 marks)
- (ii) Describe the different types of restriction enzymes (8 marks)
- b) Explain production of insulin in E.coli (10 marks)
- c) Explain the principle and basics of polymerase chain reaction. (10 marks)

QUESTION TWO (20 MARKS)

- a) Describe illumina sequencing technique clearly giving the principle behind it (12 marks)
- b) Describe the features of bacteriophage lambda as used in cloning (8 marks)

QUESTION THREE (20 MARKS)

- a) With the aid of a suitable diagram, illustration Northern blotting. (10 marks)
- b) Describe the steps in production of genomic DNA library. (10 marks)
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