



KIBABII UNIVERSITY

UNIVERSITY EXAMINATIONS
2016/2017 ACADEMIC YEAR

THIRD YEAR SECOND SEMESTER
SPECIAL/SUPPLEMENTARY EXAMINATIONS

FOR THE BACHELOR OF RENEWABLE ENERGY AND BIOFUELS
TECHNOLOGY

COURSE CODE: IPT 325

COURSE TITLE: PLANT ENGINEERING

DURATION: 2 HOURS

DATE: 25TH SEPTEMBER 2017 **TIME:** 8 – 10AM

INSTRUCTIONS TO CANDIDATES

- Answer **QUESTION ONE** (Compulsory) and any other two (2) Questions.
- Indicate **answered questions** on the front cover.
- Start every question on a new page and make sure question's number is written on each page.

This paper consists of 4 printed pages. Please Turn Over



KIBU observes ZERO tolerance to examination cheating

(SECTION A) compulsory

QUESTION ONE

- i) Discuss the principles of plant layout. (5mks)
- ii) Describe the various steps in plant layout planning. (15mks)
- iii) List the major activities for which the space has to be provided in a production plant. (5mks)
- iv) Discuss the importance of plant layout planning, (5mks)

SECTION B (CHOOSE ANY TWO QUESTIONS)

QUESTION TWO

- i) Discuss the following types of plant layout (10mks)
 - A) Product layout
 - B) Process layout
 - C) Group technology layout
 - D) Fixed position layout
- ii) Discuss the various flow patterns used in plant layout (10mks)

QUESTION THREE

- a) Define plant layout and discuss the factors that influence plant layout. (8mks)
- b) Discuss any three forms of industrial pollution and their effects to human healthy, environmental degradation, global warming, ozone layer depletion and infertile land (12mks)

QUESTION FOUR

- a) Discuss any five safety concerns in any manufacturing plant settings (10mks)
- b) List any safety tips to be followed in order to prevent accidents in manufacturing plants. (10mks)

QUESTION FIVE

- i) Discuss the two types of plant maintenance (8mks)
 - a) Preventive maintenance and corrective maintenance
- ii) Define industry and describe any three types of industry (12mks)