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KIBABII UNIVERSITY

UNIVERSITY EXAMINATIONS
2019/2020 ACADEMIC YEAR

THIRTY YEAR SECOND SEMESTER
SPECIAL/SUPPLEMENTARY EXAMINATIONS

FOR THE DEGREE OF BSC (RENEWABLE ENERGY AND BIOFUEL
SYSTEMS)

COURSE CODE: IPT 325

COURSE TITLE: PLANT ENGINEERING

DURATION: 2 HOURS

DATE: 2020 **TIME:** 9 AM

Handwritten date: 3/2/21

Handwritten time: 11-1 Pm

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 3 printed pages. Please Turn Over



KIBU observes ZERO tolerance to examination cheating

QUESTION ONE

i) Discuss the following types of plant layout

- A) Product layout (4MKS)
- B) Process layout (4MKS)
- C) Group technology layout (4MKS)
- D) Fixed position layout (4MKS)

ii) Discuss FIVE flow patterns used in plant layout (5mks)

iii) Describe how to determine the required number of machines of each type in a plant. (5mks)

iv) Discuss the two types of plant maintenance (4mks)

- a) Preventive maintenance and corrective maintenance

QUESTION TWO

- i) Discuss the principles of plant layout. (5mks)
- ii) Describe the various steps in plant layout planning.(5mks)
- 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)

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)