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**KIRIRI WOMENS' UNIVERSITY OF SCIENCE AND TECHNOLOGY**  
**UNIVERSITY EXAMINATION, 2019/2020 ACADEMIC YEAR**  
**SECOND YEAR, SECOND SEMESTER EXAMINATION**  
**FOR THE DEGREE OF BACHELOR OF SCIENCE**  
**(BUSINESS ADMINISTRATION)**

Date: 4<sup>th</sup> December, 2019  
Time: 11.00am – 1.00pm

**KBA 202 - PRODUCTION AND OPERATIONS MANAGEMENT**

**INSTRUCTIONS TO CANDIDATES**

**ANSWER QUESTION ONE (COMPULSORY) AND ANY OTHER TWO QUESTIONS**

**QUESTION ONE (30 MARKS)**

- a) With an aid of a diagram define what productions and operations management. (5 Marks)
- b) State clearly what a plant is in production and operations management as well as the considerations a firm should take when deciding which plant to use. (5 Marks)
- c) Product design plays a key role in the transformation of inputs into outputs. State clearly the product design process. (5 Marks)
- d) Define process selection and state the two key factors that are normally determined during this process. (5 Marks)
- e) Explain the main difference between a facility layout and a facility location. (5Marks)
- f) Briefly explain how you can use the knowledge gained in Productions and operations management in making decisions in a manufacturing firm. (5 Marks)

**QUESTION TWO (20 MARKS)**

- a) When it comes to the production of new products, manufacturers need to follow the steps involved in new product development process in order to produce good quality products. Discuss this process. (10 Marks)
- b) Intermittent production system is performed on a start and stop basis just like the manufacture of made to order products. Discuss in details its features. (10 Marks)

**QUESTION THREE (20 MARKS)**

- a) Everything in the world has its own life cycle. The stages of the life cycle of a product is a factor in product design. Explicate in details these stages. (10 Marks)
- b) Facility location plays an important role in production and operations management. Discuss in details its importance. (10 Marks)

**QUESTION FOUR (20 MARKS)**

- a) Plant layout serves a major purpose on the day to day operations of a manufacturing firm. Discuss the major types of plant layout. (10 Marks)
- b) Inventory management is the Scientific method of finding out how much stock should be maintained in order to meet the production demands and be able to provide right type of material at right time, in right quantities and at competitive prices. Explain in details the deterministic models it uses. (10 Marks)

**QUESTION FIVE (20 MARKS)**

- a) Explain the elements involved in the process of product planning and control. (10 Marks)
- b) Discuss the assumptions of the Economic Order Quantity and explain what benefit each assumption has in production. (10 Marks)