COURSECODE: ABA 441

COURSE TITLE: OPERATIONS MANAGEMENT.

DATE:……………………………… TIME :…………………..

DURATION: TWO HOURS

INSTRUCTIONS

This paper contains FIVE (5) questions.

Answer question one (1) and any other TWO questions.

Write all the answers in the booklet provided.

Q1 a)

  i)   Explain what is meant by the design of facility in operations management
  ii)   Outline FIVE purposes for the need for facility design in an organization
  iii) Outline with typical examples the different between process layout and product

      Layout strategy.   (9marks)

  b) i)   Describe the basic areas where inspection is carried out in production process ofan
         organization.

    ii) Outline THREE methods of inspection in an organization   (6 marks)

c) Explain the following terms as applied to operations management

      i)   Product

      ii) Operation

      Iii) Design

      Iv) Controlling   (8 marks).

d) Data regarding output of a company is given as follows:

    Out put   = Kshs6000.00

    Human resource   = Kshs 1300.00

    Supplies   = Kshs800.00

    Capital investment   = Kshs1200.00

    Power   = Kshs800.00

Required:

    i)   Calculate productivity for Human resource variable.
    ii)   Total factor productivity.
    iii)   Total productivity   (7 marks).

Q2.a)

    i)   Explains the question that good job design should answer and in each case give practical examples
    ii)   Outline FOUR objectives of job design   (10 marks).

b) Explain how the following factor affects the job structure of an organization.

i)   Labor specialization

    ii)   Ergonomics

    iii)   Environment
    iv)   Organization   (10 marks)

Q3.a)

    i)   Explain operations scheduling and state THREE principles of operations scheduling in production process of an organization.
    ii)   Describe the different between forward scheduling and backward scheduling.

iii)   Show the process using a scheduling table   (12 marks).

b) The processing time (t) in hours for five jobs is given for a single machine scheduling as in table.1

Table.1

Job	1	2	3	4	5
Processing time	20	8	10	28	14

Required

i)   Establish the optimal sequence for the schedule that will minimize the work flow time.

ii)   Calculate the mean work flow time for the schedule   (8 marks).

Q4.

a) Every organization has to design, develop and introduce new products as survival and growth strategy; outline SIX other reasons why it is important for an organization to continuously engage in design in design of products and services   (12 marks).

b) Define product cycle and outline the phases in a product cycle giving strategic activities at each face   (8 marks)

Q5.

a) Define plant layout and outline any SIX characteristics of plant lay out   (8 marks).

b) Outline the advantages and disadvantages of the following types of layouts

          i)   Combination layout.

          ii)   Product lay out

          iii)   Fixed position layout.   (6 marks).

c) Describe six problems are associated with the plant location.   (6 marks).