



MACHAKOS UNIVERSITY

University Examinations April 2019 series

SCHOOL OF ENGINEERING AND TECHNOLOGY

DEPARTMENT OF MECHANICAL AND MANUFACTURING ENGINEERING

**THIRD YEAR SECOND SEMESTER EXAMINATION FOR DIPLOMA IN
MECHANICAL ENGINEERING (PRODUCTION OPTION)**

MED - PR310 PRODUCTION AND MANUFACTURING ECONOMICS

DATE:

TIME: 2 Hours

Instructions

Answer question ONE and any other TWO questions

1 (a) Define the following terms in manufacturing economics. (4Mks)

(b) Explain breakeven analysis and state any four ways of its application. (6Mks)

(c) With the aid of diagrams explain the following terms;

(I) Manufacturing (Technological) (5mks)

(II) Manufacturing (Economics) (5mks)

(d) (i) Define forecasting and state its four uses (6Mks)

(e) Differentiate between qualitative and quantitative forecasting methods and state four general characteristics of forecasts (4Mks)

2. (a) Explain production planning and control (4Mks)

- (b) State any five functions of production planning and control (5Mks)
- (c) Identify any five objectives of Production planning and control (5Mks)
- (d) Explain the three stages in production planning and control (6Mks)
- 3. (a) Explain “Just In Time” (JIT) operation and identify its seven benefits (10Mks)
- (b) (i) Explain the concept “Do it right first time” (2Mks)
- (ii) State two benefits of the theory “Do it right first time” (2Mks)
- (iii) Outline six reasons why employees don’t do it right the first time.(6Mks)
- 4. (a) differentiate between requirements and constraints as applied to manufacturing. (4Mks)
- (b) Identify and explain any three types of manufacturing Constraints (6Mks)
- (c) Identify and explain any five types of economic constraints in manufacturing (10Mks)
- 5. (a) explain the concept of Cost-benefit analysis (5Mks)
- (b) (i) Explaining the “zero defects” idea in production (3Mks)
- (ii) Explain why “Zero defects is NOT about being perfect” (6Mks)
- (c) Explain any three forecasting qualitative methods. (6Mks)