

CHUKA



UNIVERSITY

UNIVERSITY EXAMINATIONS

FOURTH YEAR EXAMINATION FOR THE AWARD OF DEGREE
OF BACHELOR OF COMMERCE

BCOM 467: SIMULATION FOR OPERATIONS MANGEMENT

STREAMS: BCOM (Y4S1)

TIME: 2 HOURS

DAY/DATE: FRIDAY 07/12/2018

11.30 A.M. – 1.30 P.M.

INSTRUCTIONS:

- Answer question ONE and any other TWO
- Do not write on the question paper

QUESTION ONE

- (a) Discuss the following terms as used in simulation of maintenance systems.
- (i) Maintenance policies [4 marks]
 - (ii) Maintenance scheduling [4 marks]
- (b) (i) Explain the term facility layout planning [2 marks]
- (ii) Discuss any five objectives of facility layout planning [10 marks]
- (c) Explain any five reasons for use of simulation in tactical/operations management [10 marks]

QUESTION TWO

- (a) Discuss the 3 main characteristics of a queuing system, that impact its performance [9 marks]

BCOM 467

- (b) Explain the challenges faced by organizations while simulating customer service processes [8 marks]
- (c) Explain the meaning of the term model validation as used in simulation for operations management [3 marks]

QUESTION THREE

- (a) Explain any 3 benefits derived by a firm from simulating its manufacturing systems [6 marks]
- (b) Briefly, describe the application of Monte Carlo simulation in finance and business [4 marks]
- (c) Discuss the role of computer in simulation [6 marks]
- (d) Distinguish between a system and a model [4 marks]

QUESTION FOUR

- (a) For effective simulation of inventory control system, the system should take into account several key factors". Explain any 5 of these key factors. [10 marks]
 - (b) Explain the advantages and disadvantage of simulation models [10 marks]
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