

**TECHNICAL UNIVERSITY OF MOMBASA**

*School of Business*

DEPARTMENT OF MANAGEMENT SCIENCE

**ORDINARY/SPECIAL/SUPPLEMENTARY EXAMINATIONS**

**BBA/BCOM YEAR 3 SEMESTER 2**

**COURSE CODE: BPC 4305**

**COURSE TITLE: OPERATIONS MANAGEMENT**

**TIME: 2 HOURS**

**SERIES: MAY 2016**

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**INSTRUCTIONS**

- This paper consists of **FIVE** questions.
- Answer question **ONE (Compulsory)** and any other **TWO** questions

### Question one (compulsory)

A project has the following activities and characteristics:

Activity	Optimistic time	most likely time	Pessimistic time
1-2	1	1	7
1-3	1	4	7
1-4	2	2	8
2-5	1	1	1
3-5	2	5	14
4-6	2	5	8
5-6	3	6	15

Required:

- Find the expected time and the variance for each activity (4marks)
- Draw the project network (4marks)
- Find the expected length and the critical path of the project (6 marks)
- Determine the variance and the standard deviation of the critical path (project length) (8 marks)
- Explain the assumptions of critical path method (CPM) (8marks)

### Question two

- “The most significant benefit of JIT is to improve the responsiveness of the firm to the changes in the market place hence providing an advantage in competition”. Explain the benefits of JIT philosophy (10 marks)
- Describe the factors influencing a firm’s plant or facility location for its operations (10 marks)

### Question three

a) Using an appropriate model, illustrate a firm's operations function and explain the importance of operations management (10 marks)

b) Discuss the primary aims of Total Quality management (TQM) (10 marks)

**Question four**

a) Explain the fundamental factors affecting quality (10 marks)

b) Describe the benefits of quality control in firms (10 marks)

**Question five**

a) "The quality of a product or service is the fitness of that product or service for meeting or exceeding its intended use as required by the customer". Explain the dimensions of quality (8 marks)

b) Discuss the importance of capacity decisions (12 marks)

