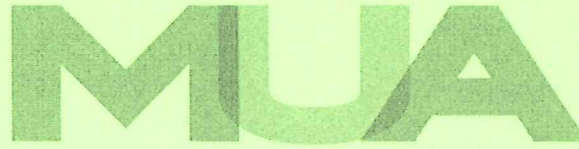


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**UNDERGRADUATE UNIVERSITY EXAMINATIONS**

**SCHOOL OF MANAGEMENT AND LEADERSHIP**

**BACHELOR OF ARTS IN DEVELOPMENT STUDIES**

**PMT 403 : STRATEGIC PORTFOLIO AND PROJECT MANAGEMENT**

**DATE: 8<sup>TH</sup> AUGUST 2024**

**DURATION: 2 HOURS**

**MAXIMUM MARKS: 70**

**INSTRUCTIONS:**

1. Write your registration number on the answer booklet.
2. **DO NOT** write on this question paper.
3. This paper contains **SIX (6)** questions.
4. Question **ONE** is compulsory.
5. Answer any other **THREE** questions.
6. Question **ONE** carries **25 MARKS** and the rest carry **15 MARKS** each.
7. Write all your answers in the Examination answer booklet provided.

## QUESTION ONE

Read the Case Study below carefully and answer the questions that follow:

### THEORY OF TRANSFORMATION AND THEORY OF PLANNING

The Theory of Constraints (TOC) is a management philosophy developed by Dr. Eliyahu M. Goldratt that focuses on identifying and addressing the most critical limiting factor (constraint) that stands in the way of achieving a goal. TOC is based on the premise that any manageable system is **limited** in achieving more of its goals by at least one constraint. Once the constraint is identified, it can be systematically improved until it is no longer the limiting factor.

#### Key Concepts of the Theory of Constraints

1. **Constraint:** Anything that prevents the system from achieving higher performance relative to its goal. Constraints can be internal (e.g., a specific piece of equipment or a process) or external (e.g., market demand).
2. **The Five Focusing Steps:** TOC uses a process of ongoing improvement, which includes the following steps:
  1. **Identify the Constraint:** Determine the single part of the process that is limiting the overall throughput.
  2. **Exploit the Constraint:** Make quick improvements to the constraint using existing resources. Ensure that the constraint is not idle.
  3. **Subordinate Everything Else:** Align the entire process to support the constraint. This may involve adjusting other processes to ensure the constraint operates at maximum efficiency.
  4. **Elevate the Constraint:** Take more significant actions to improve the constraint's capacity. This could involve investments in new equipment, training, or additional resources.
  5. **Repeat the Process:** Once the constraint is broken, the next limiting factor must be identified, and the process starts over.
3. **Throughput:** The rate at which the system generates money through sales. TOC emphasizes increasing throughput by focusing on the constraints.
4. **Inventory:** All the money the system has invested in purchasing things it intends to sell. TOC aims to minimize inventory that is not essential to maintaining throughput.
5. **Operating Expense:** All the money the system spends to turn inventory into throughput. TOC seeks to reduce operating expenses that do not contribute to increasing throughput.

#### Application of TOC

TOC can be applied in various industries and scenarios, including manufacturing, project management, supply chain management, and service industries. Here are some typical applications:

- **Manufacturing:** Identifying and addressing bottlenecks in production processes to increase throughput and reduce work-in-progress inventory.
- **Project Management:** Using Critical Chain Project Management (CCPM), a TOC-based approach that focuses on managing project constraints and buffers to ensure timely project completion.
- **Supply Chain Management:** Optimizing the flow of materials and products through the supply chain by identifying and managing constraints within the supply chain network.
- **Services:** Improving the flow of work and reducing wait times by identifying bottlenecks in service processes.

### Benefits of TOC

- **Improved Throughput:** By focusing on the most critical constraint, organizations can significantly increase their throughput.
- **Increased Efficiency:** Resources are better utilized when efforts are focused on **the constraint**.
- **Enhanced Problem-Solving:** The structured approach of TOC provides a clear methodology for continuous improvement.
- **Better Decision Making:** TOC helps prioritize actions that will have the most significant impact on the overall system.

### TOC in Practice

1. **Case Study - Manufacturing:** A factory identifies that its painting process is the bottleneck. By adding another painting station and ensuring continuous operation, throughput is increased by 20%.
2. **Case Study - Project Management:** A software development firm uses CCPM to manage its projects, leading to a 30% reduction in project delivery times.

### Conclusion

The Theory of Constraints provides a powerful framework for identifying and addressing the most critical limiting factors in any system. By focusing on constraints, organizations can achieve significant improvements in performance, efficiency, and overall success.

### Required:

- a) Describe how the concepts of the above theory affect the implementation of projects as highlighted in the case study. (5 marks)
- b) Examine the implications of **the theory of constraints** covered in the case study. (10 marks)
- c) Describe five benefits that are associated with this theory as indicated in the case study. (5 marks)

- d) As a Project Management specialist, assess the five characteristics of projects as shown in the case study and as learnt in class? **(5 marks)**

#### QUESTION TWO

- a) Discuss six attributes of a competent of project manager. **(12 marks)**
- b) ) Explain three determinants of Project success. **(3 marks)**

#### QUESTION THREE

- a) Highlight and explain FOUR sources of Project ideas. **(8 marks)**
- b) Differentiate between Project proposal and project implementation plan. **(7 marks)**

#### QUESTION FOUR

- a) Discuss three main constraints in the completion of Projects. **(9 marks)**
- b) Explain importance of project design. **(6 marks)**

#### QUESTION FIVE

- a) Discuss FOUR importance of Project Management Cycle. **(12 marks)**
- b) Explain three factors that a Project Manager should put into consideration when starting a new Project. **(3 marks)**

#### QUESTION SIX

- (a) Discuss five responsibilities of a Project Manager during Procurement **(10marks)**
- (b) Highlight five processes involved in Product Procurement Management. **(5 marks)**