

# B.M.S. College of Engineering, Bengaluru-560019

Autonomous Institute Affiliated to VTU

## February / March 2023 Semester End Main Examinations

**Programme: B.E.**

**Branch: Industrial Engineering and Management**

**Course Code: 21IM5DETOC**

**Course: Theory of Constraints**

**Semester: V**

**Duration: 3 hrs.**

**Max Marks: 100**

**Date: 07.03.2023**

**Instructions:** 1. Answer any FIVE full questions, choosing one full question from each unit.  
2. Missing data, if any, may be suitably assumed.

### UNIT - I

- 1 a) What are the 5 Focusing steps in Theory of Constraints? Explain. **10**  
b) List and explain the various Thinking Tools used in Theory of Constraints. **10**

**OR**

- 2 a) Explain the concept of Current Reality Tree with a neat diagram. **10**  
b) What is meant by Layers of Resistance in Theory of Constraints? Elaborate. **10**

### UNIT - II

- 3 a) Explain the concept of "Drum-Buffer-Rope" used in Theory of Constraints with a neat sketch. **10**  
b) What are the Advantages and Disadvantages of the D-B-R System? **10**

**OR**

- 4 a) What is a Simplified Drum-Buffer-Rope system? Explain. **10**  
b) Write a note on scheduling using Goldratt's D-B-R System **10**

### UNIT - III

- 5 a) Explain the Replenishment Model in Theory of Constraints with an example. **10**  
b) How is Demand Forecasting used in the Replenishment Process? **10**

### UNIT - IV

- 6 a) What are 3 measures of income and expense used in Throughput Accounting? **10**  
b) What are the advantages and disadvantages associated with Throughput Accounting? **10**

### UNIT - V

- 7 a) Elaborate on the Critical Chain Project Management (CCPM) used in Theory of Constraints **10**  
b) How is CCPM process superior as compared to other Project Management processes? **10**

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**Important Note:** Completing your answers, compulsorily draw diagonal cross lines on the remaining blank pages. Revealing of identification, appeal to evaluator will be treated as malpractice.