

--	--	--	--	--	--	--	--	--	--



P.E.S. College of Engineering, Mandya - 571 401

(An Autonomous Institution affiliated to VTU, Belagavi)

Eighth Semester, B.E. - Industrial and Production Engineering

Semester End Examination; June - 2017

Just in Time Manufacturing

Time: 3 hrs

Max. Marks: 100

Note: Answer FIVE full questions, selecting ONE full question from each unit.

UNIT - I

- 1 a. Define JIT. Explain the spread of JIT movement with appropriate case studies. 10
 b. List and explain the factors which enable JIT to occur. 10
 2 a. Explain the basic framework of Toyota Production system. 10
 b. List the different types of Kanban and explain the signal and material Kanban. 10

UNIT - II

- 3 a. Determine the number of Kanbans in TPS for constant quantity withdrawal system. 10
 b. Explain how the production planning system helps to implement the production smoothing process in TPS? 10
 4 a. Explain the relationship between processes and process time in TPS and also state its advantages. 10
 b. Explain with a neat sketch, of yo-i-do system using Andon method. 10

UNIT - III

- 5 a. Taking any two case studies explain seasonal demand industry with respect to JIT. 10
 b. Explain the implementation of JIT in process type industry with suitable case study. 10
 6 a. Mention the Voss and Robison survey report on JIT implementation. 10
 b. With a neat flow chart, explain the separation process of logistics system. 10

UNIT - IV

- 7 a. List the important criteria to design, development and management of JIT manufacturing system. 10
 b. With a neat sketch, explain the following plant configuration and flow analysis of JIT manufacturing: i) U-turn layout ii) Single line running mixed model. 10
 8 a. Explain the factors which distinguish between Toyota and US manufacturing philosophies. 10
 b. Explain with a neat flow chart "Two level master production schedules". 10

UNIT - V

- 9 a. Mention the important characteristics of the Japanese JIT supply system. 10
 b. Explain the following concept : 10
 i) Inventory policy ii) Frequency of shipments iii) Sole sourcing.
 10 a. State the important risks associated with Kanban systems. 10
 b. Sketch and explain the phase activities network for the design of pull system. 10