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# 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; Aug. / Sep. - 2020

**Just In Time Manufacturing**

Time: 3 hrs

Max. Marks: 100

- Note: i) Answer **TWO** full questions, selecting **ONE** full question from **UNIT - I** and **UNIT - II**.  
ii) Answer any **THREE** full questions, choosing from **UNIT - III**, **UNIT - IV** and **UNIT - V**.

## UNIT - I

- 1 a. What is NPSRA? Explain its role in implementation of JIT. 8  
b. How to enable JIT to occur? 8  
c. List the benefits of JIT. 4

## OR

- 2 a. The idea of the TPS is to maintain a continuous flow of products in factories in order to flexibly adopt demand changes, "Analyze the meaning of this statement". 4  
b. What are the steps involved in using the two Kanbans? 10  
c. Illustrate the sub-rules of Kanban rule No.1 and No.2. 6

## UNIT - II

- 3 a. Outline the production planning at TPS. 6  
b. How the TPS adopts to major demand changes occurring within the year? 6  
c. Summarize the major steps involved in mixed model assembly. 8

## OR

- 4 a. Write about the criticism of TPS by the communist party of Japan. 6  
b. Name the Information systems supporting kanban. 6  
c. List the major concepts and Techniques to reduce the setup time. 8

## UNIT - III

- 5 a. Discuss about the JIT in "automotive industry". 8  
b. Summarize the "JIT implementation at misowr homes of Japan" 8  
c. "Cultural factors do not in any way inhibit the application of JIT philosophy", defend this statement. 4  
6 a. Illustrate the findings of Imand Lee with reference to the "JIT implementation in US manufacturing firms". 8  
b. Name the any sixteen important elements in JIT manufacturing system (according to Gilbert). 8  
c. Show the contents of "Transportation kanban". 4

## UNIT - IV

- 7 a. Distinguish clearly between the “Bird cage layouts” and “Isolated island layouts”. 8
- b. Show the “inventory performance of different planning and control systems”. 8
- c. Name the six reasons for creation and maintenance of effective teams. 4
- 8 a. Compare Toyota and US manufacturing Philosophies. 10
- b. What are attitude changes needed while implementing JIT? 6
- c. Summarize the improvement afforded by JIT for the following industrial problems in developing counters : 4
- i) Inferior quality
- ii) Poor and inadequate maintenance

## UNIT - V

- 9 a. List the characteristics of JIT purchasing with respect to “suppliers” and “quantities”. 10
- b. Distinguish clearly between the JIT purchasing and Traditional purchasing under the following purchasing activity: 6
- i) Selecting supplier
- ii) Receiving inspection
- iii) Product specification
- c. “JIT benefits are not always easy to quantify”, analyze the meaning of this statement. 4
- 10 a. Illustrate the causes and remedies for the following major problems encountered in the implementation of JIT purchasing; 8
- i) Lack of support from suppliers
- ii) Lack of top management support
- b. Show the overview of the JIT performance evaluation measures. 8
- c. Discuss about the “Layout design” phase of project network approach to JIT implementation. 4

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*Murali Krishna*

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