

B.E. DEGREE EXAMINATIONS: APRIL/MAY 2012

Sixth Semester

MECHANICAL ENGINEERING

MEC131: Lean Manufacturing

Time: Three Hours

Maximum Marks: 100

Answer All Questions:-

PART A (10 x 1 = 10 Marks)

1. Which of the following doesn't come under business processes
 - a. Design of a product
 - b. Enter a customer order
 - c. Develop new business process
 - d. JIT
2. Completed products that are awaiting shipment to customers are called as
 - a. Raw materials
 - b. finished goods
 - c. WIP
 - d. Just in Time
3. The length of time into the future that we can forecast is called as
 - a. Forecast horizon
 - b. Predictions
 - c. Forecasting
 - d. Forecast systems
4. ----- represents an attempt to determine the most economical choice of alternatives for meeting demand of the customers
 - a. Aggregate planning
 - b. Capacity Planning
 - c. Strategic planning
 - d. Scheduling
5. A unique part number is assigned to each separately purchased item is called as
 - a. Inventory status records
 - b. Item number
 - c. BOM
 - d. MRP
6. The simplest type of multistage structure is called as
 - a. Serial Structure
 - b. Assembly structure
 - c. General structure
 - d. Complete structure
7. The time between recognizing the need to plan and execute a job and the completion of the job is called as
 - a. Down time
 - b. Machining time
 - c. lead time
 - d. Scheduling time
8. Poka Yoke refers to
 - a. mistake proofing
 - b. Machine gagging
 - c. Fixture design
 - d. Time reduction
9. The job with the closest due date has the highest priority index is called as
 - a. Earliest due date
 - b. Short processing time
 - c. slack time
 - d. Critical ratio
10. A system which consists of a set of CNC machines and an integrated material handling system that can be used to produce wide variety of parts is called as
 - a. FMS
 - b. CAM
 - c. CAE
 - d. CIM

PART B (10 x 2=20 Marks)

11. Define Production System?

12. What is meant by WIP?
13. Define Bull Whip Effect?
14. What is the function of logistics?
15. Write a note about assembly structure?
16. Explain BOM?
17. Mention any four ways of Eliminating waste?
18. Write down the four major categories of changes in JIT?
19. What is part type selection problem?
20. What is meant by flow shop?

PART C (5x14 =70 Marks)

21. a) What are the important principles of Production Systems? Explain them elaborately?

(OR)

- b) What is the purpose of Inventory? Explain in detail the types of inventory?

22. a) (i) Explain the purpose and use of forecasts? (7)

- (ii) Write Short notes on Dimensions of manufacturing Strategies? (7)

(OR)

- b) Briefly explain Vendor selection and Aggregate planning.

23. a) Explain MRP in detail and state its limitations?

(OR)

- b) Write notes on

- (i) Capacity Planning (7)

- (ii) Lot Sizing decisions (7)

24. a) What are the steps in eliminating waste in the production environment?

(OR)

- b) What is meant by KANBAN system? Describe the types of KANBAN Systems.

25. a) (i) Explain scheduling system requirements and its goals in detail. (7)

- (ii) Brief about flow shop scheduling. (7)

(OR)

- b) Define FMS. Explain FMS in detail.
