Register Number:……..

M.E., DEGREE EXAMINATIONS MAY/JUNE 2013

Second Semester

INDUSTRIAL ENGINEERING

IEE506: Operations Management

Time: Three Hours **Maximum Marks: 100**

Answer ALL Questions:-

PART A (10x2=20 Marks)

1. What is Operations Management?
2. Write short notes on Strategy formulation.
3. Define Forecasting.
4. What is called Delphi Method?
5. Point out the rules for Lot-for-Lot ordering in MRP.
6. Brief about the Purposes of the Master Production Schedule.
7. List the Aggregate planning strategies.
8. Name any four MRP output reports?
9. What is Lean Manufacturing?
10. Brief about Overall Equipment Effectiveness.

PART B (5 x 16 = 80 Marks)

11. a) Elaborate the scope of operation management with an suitable example.

(OR)

b) Elucidate the different type of Production System.

12. a) Enumerate the steps involved in the Forecasting Process.

(OR)

b) The following data refers to the shipment (in tones) of welded tubes by an aluminum producer

Year	1	2	3	4	5	6	7	8	9	10	11
Tons	2	3	6	10	8	7	12	14	14	18	19

Use least square method and forecast the shipment for year 16

13. a) What is “aggregating capacity planning”? Why it is needed? Discuss the steps involved in aggregate capacity planning.

(OR)

b) A small scale unit manufactures a product and it is expected to supply 80 units in week 1,120 in week 6,and 100 in week 8.Each product is made of 2 housings and shaft assembly and one wheel. For shaft assembly order quantities, lead times and inventories on hand at the beginning of period 1 are given below. Prepare MRP.

Part	order qty	lead time	inventory on hand
Housings	600	2weeks	200
Shaft assembly	400	3weeks	440
Wheel	800	1week	100

14. a) Explain the Factors Affecting the Assembly Line Balancing.

(OR)

b) Consider the following 3 machines and 5 jobs flow shop problem. Check whether Johnson’s rule can be extended to this problem. If so, what is the optimal schedule and corresponding makespan?

Job	**Machine 1**	**Machine 2**	**Machine 3**
1	11	10	12
2	13	8	20
3	15	6	15
4	12	7	19
5	20	9	7

15. a) What is JIT. Explain the Principles of JIT.

(OR)

b) Explain (i). Poka Yoke and Types of Error (8)

(ii) Pillars of TPM (8)

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