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B.Tech. (Ind. Engg. & Mgt.) (Spl. in TQM) (Sem.-3)**OPERATIONS MANAGEMENT****Subject Code : IEM-301****M.Code : 61011****Time : 3 Hrs.****Max. Marks : 40****INSTRUCTIONS TO CANDIDATES :**

1. Attempt All EIGHT questions from SECTION-A carrying TWO marks each.
2. Attempt any SIX questions out of EIGHT from SECTION-B carrying FOUR marks each.

SECTION-A**Q1. Answer briefly :**

- a) Explain the functions of operations management.
- b) Discuss the centre of gravity method of facilities location.
- c) What are the advantages of computer packages in plant layout?
- d) "Material Handling is considered necessary evil" Comment.
- e) Explain "Delphi Technique of Forecasting".
- f) Differentiate between design capacity, system capacity and installed capacity.
- g) Define MRP, CRP and BOM.
- h) What do you understand by dispatching and reporting?

SECTION-B**Q2. Differentiate between batch, job and continuous production systems.****Q3. Explain the factors that influence the location of sugar industries. Justify your answer.**

- Q4. Differentiate in brief between product, process, group technology and fixed position layout.
- Q5. State for what applications the following material handling equipments are used :
- Fork lift truck
 - Jib crane
 - Belt conveyer
 - Roller conveyer
- Q6. The following data relates the cost of production and sales prices :

	2004	2005	2006	2007	2008	2009	2010	2011	2012
Costs	203	216	223	239	248	253	279	301	311
Prices	225	242	250	271	275	277	295	318	329

Establish the co-efficient of correlation between costs and prices.

- Q7. Discuss in detail the use of decision tree for capacity planning.
- Q8. Elaborate the following :
- ERP
 - Master production schedule
- Q9. Five jobs are to be processed on two machines M_1 and M_2 in the order M_1M_2 . Processing times in hours are given below :

Job	Processing times (hrs)	
	Machine M_1	Machine M_2
1	5	2
2	1	6
3	9	7
4	3	8
5	10	4

Determine the sequence that minimizes total elapsed time. Find out the total elapsed time and idle time (if any) on M_2 .

NOTE : Disclosure of Identity by writing Mobile No. or Making of passing request on any page of Answer Sheet will lead to UMC against the Student.