

GUJARAT TECHNOLOGICAL UNIVERSITY**B. E. - SEMESTER – VII • EXAMINATION – WINTER 2012****Subject code: 171501****Date: 26/12/2012****Subject Name: Operations Planning & Control****Time: 10.30 am - 01.00 pm****Total Marks: 70****Instructions:**

1. Attempt any five questions.
2. Make suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.

- Q.1 (a)** Classify Sales Forecasting techniques. Discuss forecasting for a new product being launched, with an example. **07**
- (b)** Demand pattern for recharge vouchers of Rs. 100 in a Mobile vending shop for first 10 months of an year is as follows. Work out the demand for November & December. **07**

Jan	Feb	Mar	Apr	May	June	July	Aug	Sep	Oct
60	200	190	160	320	230	280	400	390	450

- Q.2 (a)** Define OPC function in an organization. Discuss different phases of PPC. **07**
- (b)** Discuss how PPC function is carried out in Job Production, Batch Production and Continuous production. **07**

OR

- (b)** Discuss and differentiate associative techniques of Regression analysis and Correlation analysis. **07**

- Q.3 (a)** Discuss Master Production Scheduling. Take an example of Chase- sales technique. **07**
- (b)** Discuss Route sheet preparation with an example. **07**

Or

- Q.3 (a)** What are the conditions under which you apply Johnson's rule for finding Optimal Sequence of operations? **07**
- (b)** Find the optimal sequence and total elapsed time for the following Job-Machine combination. **07**

Processing times in Hrs.

Job	1	2	3	4	5	6
M/C A	25	21	22	21	23	24
M/C B	19	17	16	18	10	17
M/C C	33	32	34	33	31	35

- Q.4 (a)** Discuss MRP. Give inputs of MRP. Discuss BOM files in detail. **07**
- (b)** Discuss capacity planning for a heat treatment plant. **07**

Or

- Q.4 (a)** What are pure strategies for aggregate planning? Why normally a mixed strategy is preferred? **07**

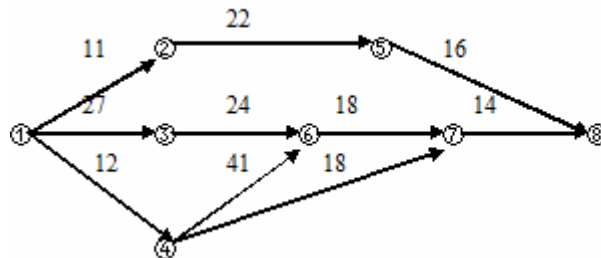
- Q.4 (b)** The demand for an item in 2011 were as follows: **07**

Months	Jan-Feb	Mar-Apr	May-June	July/Aug	Sep/Oct	Nov/Dec
Bi-monthly	870	256	350	450	600	700

demand						
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Considering that the company has sufficient man power to meet the demand in Jan-Feb, Hiring cost Rs. 7500/person, Firing Rs. 5000/Person, Inventory carrying cost Rs. 500/Unit, work out appropriate strategy for the Aggregate plan.

- Q.5 (a)** Discuss Line balancing and the Heuristic approach to a LB problem. **07**
(b) Below given is the network diagram for an assembly line. Determine assignments to work station to provide min. possible cycle time. Also determine line efficiency. **07**



Or

- Q.5 (a)** Discuss index method of scheduling. **07**
(b) Discuss Economic Manufacturing Quantity. **07**
