

Seat No.: _____

Enrolment No. _____

GUJARAT TECHNOLOGICAL UNIVERSITY**BE - SEMESTER-VII • EXAMINATION – WINTER • 2014****Subject Code: 171501****Date: 25-11-2014****Subject Name: Operations Planning and Control****Time: 10:30 am - 01:00 pm****Total Marks: 70****Instructions:**

1. Attempt all 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 07
Launched, with an example.
- (b)** Demand pattern for recharge vouchers of Rs. 100 in a Mobile vending shop for first 07
10 months of an year is as follows. Work out the demand for November &
December.

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 07
Continuous production.

OR

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

- 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 07
Sequence of operations?
- (b)** Find the optimal sequence and total elapsed time for the following Job-Machine 07
Combination.

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 07
Preferred?
- Q.4 (b)** the demand for an item in 2013 were as follows:

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

07

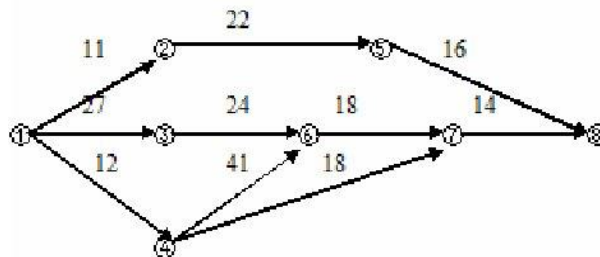
demand						
--------	--	--	--	--	--	--

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.



Or

Q.5 (a) Discuss index method of scheduling.

07

(b) Discuss Break Even Analysis..

07
