



--	--	--	--	--	--	--	--	--	--

## P.E.S. College of Engineering, Mandya - 571 401

(An Autonomous Institution affiliated to VTU, Belgaum)

**Seventh Semester, B.E. - Industrial and Production Engineering**

**Semester End Examination; Dec. - 2014**

**Operations Management**

*Time: 3 hrs*

*Max. Marks: 100*

**Note:** Answer any *FIVE* full questions selecting at least *TWO* full questions from each part.

### PART - A

1. a. Mention the various factors affecting productivity and explain any four of the briefly. 16
- b. Describe the environment of operations. 4
- 2 a. Explain the framework for decision making. 10
- b. Explain economic model with a neat shelter. 10
- 3 a. Write a note on DESIGN and systems capacity and capacity planning. 12
- b. A metal processing form wishes to install enough to automatic molders to produce 2,50,000 good casting per year. The moulding operation takes 1.5 minutes per casting, but its output is typically about 3% defective. How many molders will be required if each one is available for 2000 hours per year. 8
- 4 a Explain four forecasting variables. 8
- b. The past data for the sales of wet grinders of particular company in a area is shown below.

Month	Sales
Jan -2014	585
February	610
March	675
April	750
May	860
June	970

Forecast the demand for the month only-2014 using

- i) Simple average for all previous months
- ii) A three-months moving average.
- c. Write a note on Aggregate Planning methods. 8

### PART - B

- 5 a. Describe the activities of MRP and CRP with a flow chart. 13

Contd....2

- b. Explain the following:
  - (i) BOM 7
  - (ii) Lead Time
  - (iii) Safety stock.
- 6 a. What are the scheduling strategies? Explain any two of them. 6
- b. Mention the various method of scheduling? Explain any three of them. 12
- c. List down the STP rule. 2
- 7 a. Describe the Job shop scheduling. 5
- b. Find the optional sequence using graphical method to the following in formation of scheduling activities.

		Machines						
Job 1	{	Sequence	A	B	C	D	E	10
		Time(hrs)	3	4	2	6	2	
Job 2	{	Sequence	B	C	A	D	E	
		Time(Hrs)	5	4	3	2	6	

Also find Total elapsed time.

- c. Explain CDS heuristic. 5
- 8. Explain the following:
  - i) Flexible Workforce
  - ii) Automated production 20
  - iii) Continuous improvement
  - iv) Prevention maintenance

\* \* \* \* \*