GUJARAT TECHNOLOGICAL UNIVERSITY

BE - SEMESTER-VIII (OLD) - EXAMINATION – SUMMER 2017 Subject Code:182501 Date:04/05/2017 Subject Name: Production and Operations Management

Time:10:30 AM to 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) What do you mean by Part Print analysis? Explain part print analysis for small 07 component of your choice
 - (b) Explain exponential smoothing method of forecasting with suitable example 07
- Q.2 (a) Develop a operation process sheet to manufacture v-shape pulley having 30mm 07 diameter
 - (b) Explain SPT rule for single machine scheduling with suitable example 07 OR
 - (b) Describe EDD rule for single machine scheduling with suitable example 07
- Q.3 (a) Develop sequence and obtain total processing time for the following data 07

Job	Machine Number				
	1	2			
1	5	4			
2	2	3			
3	13	14			
4	10	1			
5	8	9			
6	12	11			

	(b)	Draw neat sketch of Break-even chart and explain each zone clearly	07
		OR	
Q.3	(a)	Explain johnson's method of n job 3 machines with suitable example	07
-	(b)	Describe inputs required in the process of scheduling	07
Q.4	(a)	Explain pure strategy for aggregate planning with suitable example	07
	(b)	Explain process of purchase and documents required with case problem	07
		OR	
Q.4	(a)	Explain methods of selective inventory control with suitable example	07

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(b)	Describe	e mixed strategy	for aggregate p	planning with	suitable example	07

Q.5 Consider the following problem of assembly line balancing:

Task	Α	B	С	D	Ε	F	G	Η
Immediate	-	Α	B	С	D	Ε	F	G
predecessor								
Task time	0.9	0.4	0.6	0.2	0.3	0.4	0.7	1.1
(min)								
Total task time (min)						4.6		

Assuming that 55 minutes per hour are productive, compute the cycle time needed to obtain 50 units per hour as the output.

- Determine the minimum number of workstations required and assign tasks based on longest task time rule
- Compute line utilization

OR

Q.5	(a)	Describe EOQ Model with neat sketch	07
	(b)	Explain inputs required to develop MRP-I sheet in detail	07
