Seat No.: _____ **Enrolment No._____**

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 component of your choice **07**

(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 diameter **07**

(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**

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

Q.5 Consider the following problem of assembly line balancing: **14**

Task	**A**	**B**	**C**	**D**	**E**	**F**	**G**	**H**
Immediate predecessor	**-**	**A**	**B**	**C**	**D**	**E**	**F**	**G**
Task time (min)	**0.9**	**0.4**	**0.6**	**0.2**	**0.3**	**0.4**	**0.7**	**1.1**
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**

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