GUJARAT TECHNOLOGICAL UNIVERSITY
BE- SEMESTER–VIII (NEW) EXAMINATION – WINTER 2020

Subject Code:2182501   **Date:25/01/2021**

Subject Name:Production and Operations Management

Time:02:00 PM TO 04:00 PM   **Total Marks: 56**

Instructions:
1. Attempt any FOUR questions out of EIGHT questions.
2. Make suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.

			MARKS
Q.1	**(a)**	Write objectives of production planning and control.	**03**
	(b)	Explain: Based on which criteria make or buy decision depends?	**04**
	(c)	Explain 3-2-1 concept of location for work-piece control. Also describe geometric control and mechanical control used for work-piece control.	**07**
Q.2	**(a)**	What are the factors affecting forecasting.	**03**
	(b)	Distinguish forecast from the broader concept of prediction. List the types of forecast errors measures used.	**04**
	(c)	Explain exponential smoothing method of forecasting with suitable example	**07**
Q.3	**(a)**	What are the objectives of scheduling?	**03**
	(b)	Explain johnson's method of n job 3 machines.	**04**
	(c)	Explain SPT rule for single machine scheduling with suitable example	**07**
Q.4	**(a)**	Define the following terms with respect to Break Even Analysis (i) BEP (ii) Margin of Safety (iii) Angle of Incidence	**03**
	(b)	What is objective of break even analysis? What are the assumptions of break even analysis?	**04**
	(c)	Describe EDD rule for single machine scheduling with suitable example	**07**
Q.5	**(a)**	Explain Mixed Model Line balancing.	**03**
	(b)	How do mixed-model assembly lines differ from traditional assembly lines? What additional decisions are required?	**04**
	(c)	What is aggregate planning? Explain clearly the strategy to meet the uneven demand.	**07**
Q.6	**(a)**	Define following terms with respect to line balancing (i) Workstation (ii) Cycle time (iii) Task (iv) Station time (v) Balance Delay (vi) LE (vii) SI	**03**
	(b)	Discuss various objectives of Aggregate Production Planning.	**04**
	(c)	Due to which factors Line Balancing Problems arises. Briefly explain Heuristic Method of Line Balancing.	**07**
Q.7	**(a)**	Explain ABC analysis.	**03**
	(b)	Explain importance of plant layout in Production and operations management.	**04**
	(c)	How material management and inventory control is helpful in Production and operation management? What do you mean by costs trade-off?	**07**

Q.8	(a)	Define: Perpetual Inventory, Periodic inventory and Lead time in probabilistic inventory models.	03
	(b)	Discuss the objectives of Material Management in an organization.	04
	(c)	Discuss the process of vendor selection. How it affects the performance of an organization?	07

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