M.E. Fourth Semester (Production Technology & Management) (P.T.) (CBS)

13541 : Process Engineering : 4 SPTM 1

P. Pages : 2 | **AW - 3699**

Time : Three Hours | Max. Marks : 80

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Notes :
1. Answer **any three** question from Section A and **any three** question from Section B.
2. Due credit will be given to neatness and adequate dimensions.
3. Assume suitable data wherever necessary.
4. Diagrams and chemical equations should be given wherever necessary.
5. Retain the construction lines.
6. Illustrate your answer necessary with the help of neat sketches.
7. Use of pen Blue/Black ink/refill only for writing the answer book.

SECTION – A

1. a) Discuss the role of process engineer and why the process engineer is called HUB of the organisation? What information a process engineer should get from a product engineer. **7**

b) What do you mean by the geometry of form? How it is specified on the ground? **7**

2. a) What is workpiece control? How can it be achieved. Explain. **6**

b) What is the impact of part configuration (shape and size) on manufacturing the part. **7**

3. a) What are the desired qualities in the product Engineer? Also sate functions of a product engineer. **7**

b) Define the following terms. **6**
i) Roundness
ii) Straintness
iii) Flatness
iv) Symmetry

4. a) What are the rules for contributing tool forces and holding forces in mechanical control. **7**

b) Explain **6**
i) Dimensional control
ii) Identifying operations
iii) centerline control of horizontal workpieces.

5. a) What are the various systems of dimensioning? Which system of dimensioning is more preferred & why. **7**

b) Show with neat sketch the arrangement of locators for achieving the good geometrical control in the following. **6**
i) Short square pyramid
ii) Long cylinder.

SECTION – B

6	a)	How unnecessary process operations be eliminated during process planning.	6
	b)	Explain what way process can influence material cost.	7
7.	a)	Explain why process critical areas should be developed prior to product critical areas.	6
	b)	What are major process operation? How do major process operations differ from principal process operations?	7
8.	a)	State the difference between GPM and SPM. What conditions should prevail before SPM can be justified?	7
	b)	Describe following. i) Manufacturing sequence determination. ii) Forward and backward planning.	6
9.	a)	Explain i) Simulation ii) Integration How do progressive type of operations fit into this category.	7
	b)	What is leasing? What is its advantage and disadvantage as compared to ownership.	6
10.	a)	What are the effects of material solution economic size and proper control on the process cost?	7
	b)	What is basic process operation, why are they normally not performed in fabricating plant.	7

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