M.E. First Semester (Mechanical Engineering (CAD/CAM)) (F.T.) (CBS)

13486 : Elective-I : Concurrent Engineering : 1 MCC 5

P. Pages : 1

Time : Three Hours

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AW – 3732Add

Max. Marks : 80

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

SECTION – A

1. Describe principles of concurrent engineering. Discuss traditional versus concurrent design approach. **13**

2. a) Explain how a process model can be used as a part of control strategy for process improvement. **7**

b) What is the role of supplier involvement in concurrent Engineering? Explain. **7**

3. Describe in detail technical and economic aspects related to manual fixed automated and flexible automated assembly systems. **13**

4. a) Discuss the importance of material selection and process selection in concurrent engineering. **7**

b) Explain how DFM can be successful. **6**

5. a) Describe in detail the various factors considered in system design. **7**

b) Describe the role of computers in C.E. with suitable examples. **6**

SECTION – B

6. Describe in detail the steps in fabrication system design methodology. **13**

7. a) What do you mean by process consolidation? What are its advantages? **6**

b) Describe various technical issues of Assembly work station. **8**

8. a) Explain how detailed work content analysis is carried out. **8**

b) Explain the concept of process quality assurance. **5**

9. a) Discuss the objectives of modern fabrication system design. **6**

b) Distinguish between close families and open families with examples. **7**

10. a) What are the elements of economic analysis of manufacturing systems? Also describe various types of manufacturing costs.

b) What do you mean by :
i) Depreciable investment. ii) Capital recovery.

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