Register Number: ……..

**M.E DEGREE EXAMINATIONS: JUNE 2013**

Second Semester

**M.E CAD/CAM**

CCM 508: Design For Manufacture, Assembly And Environments

**Time: Three Hours** **Maximum Marks: 100**

**Answer all Questions**

**PART A (10 x 2 = 20 Marks)**

1. What is “Basic design”?
2. Explain manufacturing datum.
3. What is functional datum?
4. State any two design rules for arc welding with sketch.
5. Explain the metal fiber running in forging.
6. Give four design rules for hand forging.
7. Give an example for design for machinability.
8. Give an example for two possible parting lines for a component.
9. Explain part family.
10. What is local issue? Give two examples.

**PART B (5 x 16 = 80 Marks)**

11. a) State the design principles for manufacturability and discuss with suitable examples.

**(OR)**

b) (i) Explain and discuss the techniques to find various possible solutions. (12)

(ii) Discuss the evaluation scheme for mechanism selection. (4)

12. a) Discuss any eight rules for designing casting components with examples.

**(OR)**

b) Explain Simplification by separation and Simplification by Amalgamation with examples.

13. a) Explain design considerations for drilling, keyways, Dowelling and countersunk head screws with examples.

**(OR)**

b) (i) Explain the following with suitable sketches. (8)
Design for machinability.

(ii) Design for accessibility. (8)

14. a) Explain the Computer Applications in DFMA in detail.

**(OR)**

b) Explain Re-design for manufacturing with suitable examples.

15. a) State the Environmental objectives and discuss in detail.

**(OR)**

b) (i) Explain the following in detail. (8)
AT&T'S environmentally responsible Product Assessment.

(ii) Weighted sum assessment method. (8)