

Code: 9D49106c

M.Tech I Semester Regular & Supplementary Examinations February 2016

DESIGN FOR MANUFACTURING

(Common to CAD/CAM & PEED)

(For students admitted in 2013, 2014 & 2015 only)

Time: 3 hours

Max Marks: 60

Answer any FIVE questions
All questions carry equal marks

- 1 (a) Explain the general design rules for manufacturing of a component.
(b) What are the difference between design for manufacturing and detail design explaining the various terms involved?
- 2 (a) Explain the relationship between material selection and process selection for a given component.
(b) Discuss the study on materials selection with relevance to process selection chart.
- 3 Explain with a suitable example the steps in improving the design of a component from the point of view of machining.
- 4 (a) What is the significance of solidification simulation in casting design?
(b) Explain the general design consideration for casting.
- 5 (a) Explain the effect of thermal stresses in weld joints.
(b) Explain the pre and post treatment methods of welding.
- 6 (a) Explain the chief factors in the design of forging.
(b) Distinguish between the closed die forging design and drop forging die design.
- 7 With a neat sketch, explain the Keeler Goodman Forging line diagram.
- 8 (a) Explain the design consideration for regard to important mechanical properties.
(b) With a neat sketch, explain the design considerations of injection moulding.
