

Code No: G0405/R13

M. Tech. I Semester Supplementary Examinations, January-2017

**DESIGN FOR MANUFACTURING**

(CAD/CAM)

**Time: 3 hours****Max. Marks: 60**


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*Answer any FIVE Questions*  
*All Questions Carry Equal Marks*

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| 1. a | Explain how creativity can influence design with a suitable example.         | 6 |
| b    | Discuss briefly the basic principles of designing for economical production. | 6 |
| 2. a | Explain various machining costs considered in design for machining.          | 6 |
| b    | Explain the selection of materials for optimum machinability.                | 6 |
| 3. a | Justify the statement "Casting design influences casting properties".        | 6 |
| b    | Explain briefly any two casting guidelines with neat sketches.               | 6 |
| 4. a | Discuss the affects of casting design on solidification.                     | 6 |
| b    | Explain the effect of porosity on casting properties.                        | 6 |
| 5. a | Explain the concept of redesigning in design for machining.                  | 6 |
| b    | How one can obtain dimensional accuracy and surface finish in casting?       | 6 |
| 6. a | Explain the effect of thermal stresses on weld joints.                       | 6 |
| b    | Explain briefly the design rules for welding.                                | 6 |
| 7. a | Explain parting line design of dies.   | 6 |
| b    | Discuss the design guidelines for brazed joints.                             | 6 |
| 8. a | What is the importance of Keeler Goodman forging line diagram.               | 6 |
| b    | Explain visco elastic and creep behavior in plastics.                        | 6 |

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