

Roll No. ....

**22233**

**M. Tech 2nd Sem. (Mechanical Engg.)  
(Machine Design)  
Examination – May, 2018**

**PRINCIPLES OF MACHINE DESIGN**

**Paper : M-806-A**

***Time : Three Hours ]***

***[ Maximum Marks : 100***

*Before answering the questions, candidates should ensure that they have been supplied the correct and complete question paper. No complaint in this regard, will be entertained after examination.*

**Note :** Attempt any *five* questions. Each question carry equal marks.

1. Explain the new product planning and development process. What are the characteristics of a good learner? 20
2. Describe the basic procedure of machine design. Design consideration for costing and forging. 20
3. List the factors that are important in developing a new technologically oriented product. 20

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4. Explain classification of Machine Design and General Considerations in Machine Design. 20
  5. Give description of design specification and activities in Product Planning and development. 20
  6. Explain : 20
    - (a) Stress concentration
    - (b) Factor of safety for fatigue loading
    - (c) Endurance limit
    - (d) Notch sensitivity
  7. Classification of engineering materials and selection of materials for engineering purposes. 20
  8. What do you understand by invention and classified its categories in detail. 20
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