

**ME-8001 (CBGS)**  
**B.E. VIII Semester Examination, June 2020**  
**Choice Based Grading System (CBGS)**  
**Advance Machine Design**

*Time : Three Hours*

**Maximum Marks : 70**

- Note:** i) Attempt any five questions.  
ii) All questions carry equal marks.

1. a) Explain the different phases of machine design.  
b) What do you mean by uncertainty? How does it affect designing process?
2. What are the points considered while designing based on?
  - i) Theory of elasticity
  - ii) Theory of plasticity
3. Discuss different theory of failures.
4. a) What are different lubrication parameter which play a role during design?  
b) Explain different types of wear in brief.
5. a) Why tolerances are required in mating parts?  
b) Discuss salient features of designing a unsymmetrical section.
6. What is a strain gauge? Explain different types of strain gauges.
7. a) What is photoelasticity? Explain.  
b) Draw and explain any potentiometric circuit.
8. Write short notes on any two :
  - a) Design based on propagation of defects
  - b) Design of parts subjected to unsymmetrical bending
  - c) Effect of surface characteristics on designing.
  - d) Design software and its advantages

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