

**ME-114****B.E. I & II Semester**

Examination, June 2017

**Choice Based Credit System (CBCS)  
Fundamentals of Mechanical Engineering***Time : Three Hours**Maximum Marks : 60*

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

1. a) What is Sheet metal working? Write down its advantages and disadvantages.  
b) Discuss the various tools/equipments used in arc welding process.
2. a) Explain the various types of flames generated in oxy-acetylene gas welding.  
b) Explain the various operations performed on lathe machine.
3. a) What is functions of engines? Write down its classifications.  
b) Differentiate between four stroke cycle engine and two stroke cycle engine.
4. a) Sketch the general arrangement of a hydropower plant and state the function of its different components.  
b) Discuss the various components of nuclear power plant.

5. a) Explain about the different types of spring used.  
b) What do you mean by chain drive? Write down its advantages and disadvantages.
6. a) State the first law of thermodynamics. Write down its corollaries.  
b) Sketch and describe a cochran vertical boiler.
7. a) Explain following phenomenon related to plastic deformation of materials.  
b) Discuss the various factors affecting the mechanical properties of metals.
8. Write down short notes on any four of the followings:
  - a) Single point cutting tool
  - b) Centrifugal pump
  - c) Cam profile
  - d) Economiser
  - e) Brinell hardness testing

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