

**DIPLOMA IN MECHANICAL ENGINEERING  
(DME)/DMEVI**

**00423** **Term-End Examination**  
**June, 2018**

**BME-050 : ENGINEERING MATERIALS**

*Time : 2 hours*

*Maximum Marks : 70*

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**Note :** Attempt any **five** questions. All questions carry equal marks.

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1. (a) Distinguish between ductile and brittle materials. Give two examples of ductile and brittle materials. 7
- (b) Differentiate between elastic and plastic deformation of a tensile test specimen. 7
2. (a) What is strain hardening ? Where can these properties be used in production ? 7
- (b) How are the specimens of Charpy and Izod impact test kept in vice for testing ? Explain with the help of a neat diagram. 7

3. (a) What is creep ? Explain with a diagram the different stages of creep. 7
- (b) Draw a cooling curve of pure iron. Explain the different structure obtained. 7
4. (a) Describe different methods of surface hardening. Give two examples of surface hardening components or parts. 7
- (b) What are Babbitts ? Why are they preferred in bearings ? 7
5. (a) Describe various types of insulators. 7
- (b) What is an abrasive ? Which materials are used for abrasive cutting ? 7
6. (a) Describe in brief, thermosetting and thermo-plastics with the help of suitable examples. 7
- (b) Describe different types of adhesives and their properties. 7
7. (a) What are the different methods of surface treatment ? What is the purpose of coating ? 7
- (b) Give classification of lubricants. 7