

PARUL UNIVERSITY
FACULTY OF ENGINEERING & TECHNOLOGY
M.Tech. Winter 2017 - 18 Examination

Semester: 1
Subject Code: 03208104
Subject Name: Material Technology

Date: 02/01/2018
Time: 2:00pm to 4:30pm
Total Marks: 60

Instructions:

1. All questions are compulsory.
2. Figures to the right indicate full marks.
3. Make suitable assumptions wherever necessary.
4. Start new question on new page.

- Q.1** A) Describe Elasticity with the help of stress strain curve. (05)
B) Composite materials are all purpose material. Evaluate the statement. (05)
C) Explain briefly High Strength Low Alloy. (05)
- Q.2 Answer the following questions.** (Attempt any three) (Each five mark) (15)
A) What is Hardenability? Explain in brief the factors affecting hardenability.
B) Which alloy should be used for turbine blade? Why?
C) Enlist the manufacturing process of composite material. Describe any one in detail.
D) Differentiate Annealing and Normalizing.
- Q.3** A) Write a short note on factors affecting selection of material. (07)
B) Describe any one plastic manufacturing method. (08)
- OR**
- B) Give your comments on the influence of service conditions on the performance of materials. (08)
- Q.4** A) What is work hardening? Explain theory of slip and theory of dislocation in context of work hardening. (07)
- OR**
- A) Which are the heat treatments used for stress relieving. Explain any one. (07)
B) What is precipitation hardening? Enlist the precipitation hardened materials. (08)