

SUBJECT CODE NO: E-8168
FACULTY OF ENGINEERING AND TECHNOLOGY
M.E. (Mechanical) Examination Nov/Dec 2017
Modern Engg. Materials
(Revised)

[Time: Three Hours]

[Max.Marks:80]

N.B Please check whether you have got the right question paper.

- i. Solve any three questions from each section
- ii. Assume suitable data whenever required
- iii. Draw neat sketch whenever required
- iv. Figure to right indicate full marks.

Section A

- Q.1 a) Ferrous materials are widely used in engineering application? Explain 07
b) What is HSLA steel? Where it's used. 06
- Q.2 a) Describe the effect of increasing zinc content on properties of brasses 07
b) Statues are manufactured by which bronze and why? 06
- Q.3 With an example explain any one polymer matrix composite material in detail 13
- Q.4 Write short note on any two 14
- i) Fibers in composites
 - ii) Stainless steel
 - iii) Brazing Brass.

Section B

- Q.5 What is rule of mixture for binary composites? Derive the expression for rule of mixture. 13
- Q.6 a) What are hybrid composites? Explain with example. 07
b) How are polymers different than metals? Explain. 06
- Q.7 a) Where elastomers are used? Explain why? 07
b) Abrasive ceramics are used in machining. explain how? 06
- Q.8 Write short note on any two 14
- i) Cement and concrete.
 - ii) Laminated composites
 - iii) Structure of refractories