

Government College of Engineering, Aurangabad

(An autonomous Institute of Government of Maharashtra)

B.E. (Mechanical), Examination

End Semester Examination Nov/Dec 2016

ME463: ADVANCE MATERIALS (EL-II)

Time : Three Hours

23 NOV 2016

Max.Marks:60

“Verify the course Code and check whether you have got the correct question paper”

N.B.

1. All questions are compulsory.
2. Figures to the right indicate full marks.
3. Assume suitable data if necessary and state it clearly.
4. Use of non-programmable calculators is allowed.

Q.1. Attempt any two

- 1) Briefly describe the application of composites in engineering,
- 2) List all the advantages and Limitations of composites in engineering
- 3) What are the most important mechanical properties of composites?

(12)

Q.2. Attempt any two

- 1) Explain in detail the strengths of orthotropic lamina
- 2) Give the complete analysis of Laminated Composites
- 3) What do you mean by stress strain variations in laminates

(12)

Q.3. Attempt any two

- 1) What are filled composites, give examples
- 2) Give the properties of ceramic matrix materials
- 3) Explain the role of engineering in dental composites

(12)

Q.4. Attempt any two

- 1) Explain in brief applications for non-ferrous materials
- 2) Explain the various grades and applications of heat resisting steel
- 3) What are the various types of heat treatment, explain very briefly

(12)

Q.5. Explain any two in detail with examples

- (1) Cement and concrete
- (2) Structures of refractories
- (3) Classification and properties polymers and plastics

(12)