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Question Paper Code : 71337

B.E./B.Tech. DEGREE EXAMINATION, APRIL/MAY 2017.

Seventh Semester

Aeronautical Engineering

AE 6702 — EXPERIMENTAL STRESS ANALYSIS

(Regulations 2013)

Time : Three hours

Maximum : 100 marks

Answer ALL questions.

PART A — (10 × 2 = 20 marks)

1. Define range of an instrument.
2. List the factors affecting accuracy.
3. State the working principle of an acoustical strain gauge.
4. List the different types of electrical strain gauges.
5. Define material sensitivity factor of a wire material.
6. Explain the uses of strain rosette.
7. Explain optical birefringence.
8. What is a wave plate? Explain.
9. What is threshold strain of a brittle lacquer?
10. What is holography? Explain briefly.

PART B — (5 × 16 = 80 marks)

11. (a) Briefly explain the ideal requirement of a measuring device.

Or

- (b) What is gauge length? Explain its importance in general field where strain is varying in the axial direction of gauge.

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