(b) Describe the machining of a photo elastic casting. (10)

8. Write short notes on : (20)

(a) Brittle coating application

(b) Separation of stresses

(c) Gauge sensitivity

Roll No. .....

22223

M. Tech. 1st Semester Mechanical Engg. (Machine Design) Examination– December, 2016

EXPERIMENTAL STRESS ANALYSIS

Paper : M-805-A

Time : 3 hours ***Max. Marks : 100***

Before answering the questions, candidates should ensure that they have been supplied the correct and complete question paper. No complaint in this regard will be entertained after the examination.

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

1. (a) Explain the working of single pressure output pneumatic strain gauge. (10)

(b) Explain with sketch dual-temperature-compensated semi conductor strain gauge. (10)

2. Discuss the various types of bonded type gauges. (20)

3. What is strain gauge adhesive ? Explain how strain gauge adhesive is used in strain groups and how the fixing of gauges is done. Explain. (20)

4. Explain with the help of sketch Potentiometer circuit and Wheatstone bridge. (20)

5. (a) Enumerate the properties of an ideal photoelastic material. (10)

(b) Write short note on plane polarized and elliptically polarized light. (10)

6. (a) Explain the working of reflection Polariscope employed to record the birefringe coating data. (10)

(b) Explain any one type of pf mismatch technique. (10)

7. (a) Explain the method calibration of ideal photoelastic material using a circular disc, under diametral compression. (10)