



12. a) Explain the physical operation of strain gauges. Also explain wheatstone bridge applications for strain gauges. (13)

(OR)

- b) What is a triangular strain Rosette and how is it employed to obtain magnitude and direction of principal stresses. (13)

13. a) i) What is stress optic law ? (4)
ii) Distinguish between plane polariscope setup and circular polariscope setup with neat sketches and their components. (9)

(OR)

- b) i) What is meant by compensation technique ? Explain. (7)

- ii) What is meant by separation technique ? Explain. (6)

14. a) Explain the following Moire techniques :

- i) E-beam process. (7)

- ii) Lithographic techniques for grating. (6)

(OR)

- b) Explain the following Moire technique process :

- i) Generating and recording in fringe pattern. (7)

- ii) Moire generation of fringe pattern. (6)

15. a) What do you mean by 'Acoustic Emission' ? Explain the phenomena and uses of Acoustic Emission. (13)

(OR)

- b) Explain the concept and materials used for Fluorescent Penetrant Inspection (FPI). Also state the advantages and disadvantages of it. (13)

PART - C

(1×15=15 Marks)

16. a) Explain the working of six component wind tunnel balance with necessary diagrams and equations. (15)

(OR)

- b) Explain the clearly the all the equipment of radiography. (15)