

Reg.No. \_\_\_\_\_



**Karunya UNIVERSITY**

(Karunya Institute of Technology & Sciences)  
(Declared as Deemed-to-be University under Sec.3 of the UGC Act, 1956)

**End Semester Examination – Nov/Dec – 2016**

**Code : 14AE2028**

**Sub. Name : Experimental Stress Analysis**

**Semester : 2016-17 ODD**

**Duration : 3hrs**

**Max. marks : 100**

**ANSWER ALL QUESTIONS (5 x 20 = 100 Marks)**

Q. No.	Sub Div.	Questions	Course Outcome	Marks
1.		Briefly explain the working principle Pneumatic Strain Gauges and Acoustical Strain Gauges.	CO1	20
(OR)				
2.		Briefly explain the working principle Mechanical-Optical Gauges and Photoelastic Strain Gauges .	CO1	20
3.		Briefly Explain the working principle of Bonded Filament Type and Ailtech Weldable Gauges.	CO1	20
(OR)				
4.		Derive the expression for output voltage of balanced and un-balanced Wheatstone bridge circuit.	CO2	20
5.		List out essential properties of the strain gage materials and explain the strain gauge mounting methods.	CO2	20
(OR)				
6.		Derive the expression for change in voltage $\Delta E$ of the potentiometer circuit.	CO2	20
7.		Explain the effects of stressed model in circular polariscope in dark-field set up.	CO2	20
(OR)				
8.		Sketch a plain polariscope and explain the effects of a stressed model and the fringes obtained in it.	CO2	20
<b><u>Compulsory:</u></b>				
9.		Explain fringe sharpening and fringe multiplication techniques used in photo elasticity.	CO2	20

ALL THE BEST