

Menoufiya University
 Faculty of Engineering
 Shebin El-Kom
 Postgraduate-PhD
 Final Exam



Subject/code: Optical Fiber Based
 Monitoring of High Voltage Power/ELE709
 Equipment.
 Time Allowed: 3 hours
 Date: 16-1-2015

Allowed Tables and Charts: (None), Total marks: 100

Answer ALL Questions:

Question (1) (35 Marks)

- (1-a) What is the fiber optics and summarize their applications?
- (1-b) Compare between optical fiber modes.
- (1-c) Write short notes on:

Refraction - Total Internal Reflection - Numerical aperture - Acceptance Angle

Question (2) (30 Marks)

- (2-a) Discuss how does the optical fiber transmit light?
- (2-b) What is the attenuation in optical fiber and declare their causes?
- (2-c) Explain how to test optical fiber.

Question (3) (35 Marks)

- (3-a) Explain the dispersion in fiber optics and declare their causes? Give an example for dispersion in fiber optics.
- (3-b) What are the advantages and disadvantages of fiber optics?
- (3-c) What is meant by material dispersion and chromatic dispersion?

Good Luck Prof. Mohamed A. Izzularab
 Dr. Amr M. Abdul-Hady

This exam measures the following ILOs												
Skills	Knowledge & Understanding Skills				Intellectual Skills				Professional Skills			
	a1-1	a2-1	a4-1		b1-1	b9-1			c2-1	c3-1		
Question Number	Q1-a, b	Q1-c Q2-b	Q3-a,b		Q1-a,b	Q3-c			Q3-a,b	Q2-a,c		