

KFUPM
Department of Physics
Phys412

Homework # 7

Due on Tuesday, April 24, 2007

Problem 1

Problem 4.10 from your textbook.

Problem 2

Problem 4.12 from your textbook.

Problem 3

Start from Eqs. (4.7.24) and (4.7.21) to derive Eq. (4.7.27). Show your work in detail.

Problem 4

Draw a graph showing the distribution of light intensity along the axis of a TEM_{00} Gaussian laser beam.

Problem 5

By using Eq. (4.7.31), reproduce the shapes in Fig. 4.19 of your textbook. Show also the intensity pattern for TEM_{22} .