

**UNIVERSITY COLLEGE LONDON**

University of London

**EXAMINATION FOR INTERNAL STUDENTS**

For The Following Qualification:-

*M.Sc.*

**ESGL6: Lighting: Applied Calculations**

**COURSE CODE : ENVSGLO6**

**DATE : 17-MAY-04**

**TIME : 14.30**

**TIME ALLOWED : 2 Hours**

UNIVERSITY OF LONDON

MSc DEGREE IN BUILT ENVIRONMENT 2004  
for Internal Students of University College London

ESGL6: Lighting: applied calculations

Answer **TWO** questions.

All questions carry equal marks. Use annotated sketches.

1. What are the principal measures of major and minor road lighting? Explain why they are different and describe the areas over which calculations are made.
  
2. Staff working in an open-plan office area increasingly complain of their dislike and dissatisfaction with the lighting. Describe the equipment and procedures that you might employ to define the photometric characteristics of the daylighting and electric lighting provision in the office. How would these measurements be useful in identifying the cause of the problem?
  
3. Prepare a description of the stages involved in the measurement of the spectral power distribution from a warm-white 20W fluorescent lamp and the subsequent calculation of chromaticity co-ordinates. Outline key details of the equipment used.
  
4. Define *disability* and *discomfort* glare.  
  
How may the Unified Glare Rating (UGR) of an installation be predicted ?  
What are the appropriate limiting glare criteria ?

END OF PAPER