UNIVERSITY COLLEGE LONDON

University of London

EXAMINATION FOR INTERNAL STUDENTS

For The Following Qualification:-

M.Sc.

ESGL2: Lighting Sources

COURSE CODE	:	**ENVSGL02**
DATE	:	**12-MAY-05**
TIME	:	**14.30**
TIME ALLOWED	:	**2 Hours**

05-C0422-3-40

TURN OVER

UNIVERSITY OF LONDON

MSc DEGREE IN BUILT ENVIRONMENT 2005
for Internal Students of University College London

ESGL2: Lighting sources

Answer **TWO** questions.

All questions carry equal marks. Use annotated sketches.

1. Describe the construction and operation of a variable luminance sky for the prediction of sunlight and daylight using scale architectural models.

   What procedures are adopted to ensure accuracy in the construction of the models and in the measurement process?

2. Explain the significance of the following factors when specifying luminaires for use in regular arrays:

   a) light output ratio

   b) spacing to mounting height ratio

   c) utilisation factor

   d) surface luminance ratio.

3. Discuss the inter-related role of lighting equipment (lamps, luminaires, controls), daylighting availability and electric lighting control systems in the reduction of energy consumption in buildings.

TURN OVER

4. Table 1 shows a range of lamp types.

Table 1

Lamp Type
Incandescent – tungsten filament
Incandescent – tungsten halogen
Compact fluorescent
Tubular fluorescent
Low pressure sodium
High pressure sodium
High pressure metal halide

Outline their operational characteristics, including colour properties, and describe their potential applications.

END OF PAPER