

UNIVERSITY COLLEGE LONDON

University of London

EXAMINATION FOR INTERNAL STUDENTS

For The Following Qualification:–

M.Sc.

Advanced Integrated Lighting Design

COURSE CODE : BENVLL04

DATE : 17-MAY-06

TIME : 10.00

TIME ALLOWED : 3 Hours

UNIVERSITY OF LONDON

MSc DEGREE IN BUILT ENVIRONMENT 2006
for Internal Students of University College London

BENVLL04: Advanced integrated lighting design

Answer **FOUR** questions.

All questions carry equal marks. Use annotated sketches.

1. An historic bath house (1790) is shown in Figure 1 with mirror-image staircases curving down to the water and a subtle top roof-light. Suggest an elegant, discrete electric lighting installation which allows the space to be revealed at night.

2. London councils are committed to providing *social spaces* along harsh inner city streets as part of their programme of urban improvements, seeking to make space for residents, tourists, commuters, local schoolchildren and local business. They take the form of broadening the pavement, providing a bench or two, a couple of trees and signage/information points indicating local attractions.

Describe the essential elements of a lighting design for such a space at night and how are these reconciled with the surrounding urban environment.

3. Prepare a sketch design proposal for a free-standing uplighter. It is to be used in 18th or 19th century buildings, which are now used as museums, to provide a degree of light on decorative ceilings and must therefore contribute to the appearance of an historic interior. Suggest an appropriate lamp and give an indication of the tools, materials and processes employed in its construction.

TURN OVER

BENVLL04: Advanced integrated lighting design *continued*

4. **Comment on the following key issues when considering suitable workplace lighting:**
 - (a) **determining glare limits for Display Screen Equipment (DSE)**
 - (b) **allowing light onto the ceiling**
 - (c) **accommodating partition systems.**

5. **The management of a concert hall in a continental European city wants to change the movement pattern of clients through the foyer and to attract them to information stands. Present a lighting appraisal checklist to determine the character of the existing lighting installation.**

6. **The lighting of bridges across major rivers in cities is becoming commonplace. Explore the possible conflicts in lighting for road traffic, lighting for river traffic and lighting for the pedestrian observer from the river bank.**

7. **A typical sequence of spaces in a modern hospital is the transition from the hospital 'street' along a corridor, through the staff base and into the ward. Explore how daylighting, electric lighting and creative colour may be used to provide a pleasant, welcoming visual environment which assists orientation and wayfinding for a wide range of users.**

8. **A gatehouse to an abbey has a slate roof and a pink and white decorative stone façade (Figure 2). Describe the design approach you might take to lighting the façade and use annotated sketches to indicate the lit appearance and the type and position of the lighting equipment.**

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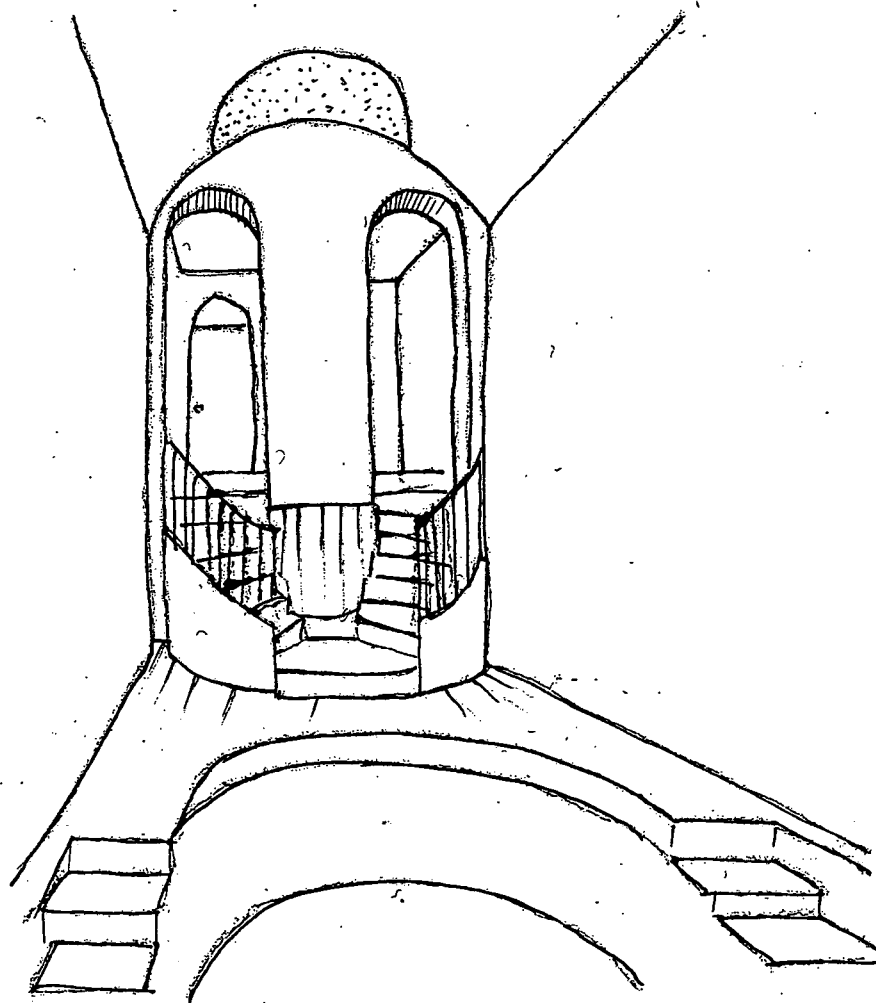


Figure 1 Historic bath house with rooflight shown dotted. Finishes are generally white throughout except for light natural wood floor and light wood cladding to central column where stairs join. Sides and floor of bath are sky blue finish.

TURN OVER

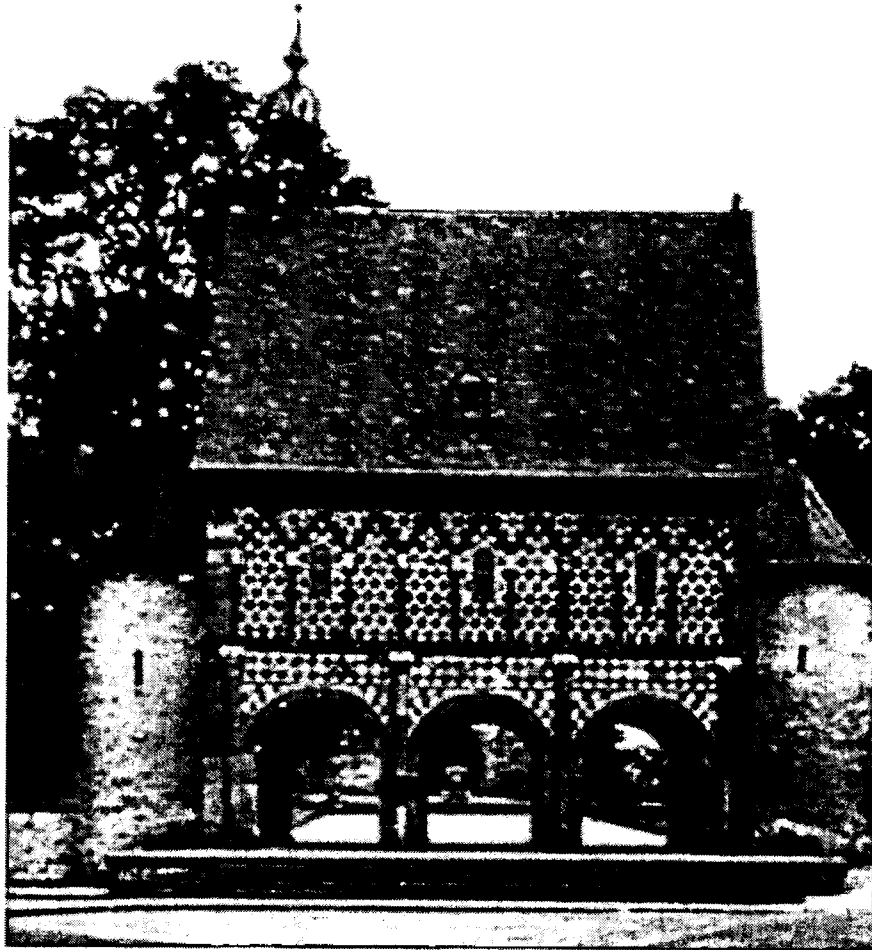


Figure 2 Gatehouse to an abbey.

(Prof L Nees)

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