

OLLSCOIL NA hÉIREANN, GAILLIMH  
NATIONAL UNIVERSITY OF IRELAND, GALWAY

SUMMER EXAMINATIONS 2000/2001

HIGHER DIPLOMA IN APPLIED SCIENCE  
(OCCUPATIONAL HEALTH AND HYGIENE)

SAFETY AND RISK MANAGEMENT (IE 875)

Dr. C. Hartley  
Prof. M.E.J. O'Kelly  
Mr. E. Fallon  
Ms. M Kelly

Time Allowed: 3 hours

Answer any 5 questions

Use separate answer books for Section A and Section B

**Section A**

- |   | <b>Marks</b>    |
|---|-----------------|
| <b>Q.1</b> Write short notes on four of the following:  | <b>(5x4)</b>    |
| (a) Biological hazards  |                 |
| (b) The role of safety in systems design  |                 |
| (c) Farm Safety   |                 |
| (d) Theories of accident causation  |                 |
| (e) The function of a safety statement  |                 |
| (f) Scaffolding safety  |                 |
| <br><b>Q.2</b> (a) Discuss risk assessment as it applies to safety in the workplace.  | <br><b>(10)</b> |
| (b) Describe, in detail, two different methodologies with which you are familiar.   | <b>(10)</b>     |
| <br><b>Q.3</b> (a) Outline a number of approaches that have been used to describe the dangerous parts of machinery.   | <br><b>(6)</b>  |
| (b) What are the principle factors used to determine the level of risk associated with machinery? Using a risk assessment method with which you are familiar, demonstrate how these risk factors could be assessed. | <b>(14)</b>     |

**Q. 4** With regard to Safety Management Systems explain the following:

- (a) Why properly trained and experienced safety programme co-ordinators are essential to the success of a Safety Management System. (10)
- (b) Why consultation on Health and Safety matters is essential. (10)

**Q. 5** (a) Describe the main hazards found on a construction site and outline some control measures that will help prevent accidents. (10)

- (b) How can a safety management system help to improve construction site safety? (10)

**Q. 6** (a) Discuss the main hazards associated with electricity and detail how these can be controlled to ensure safety. (12)

- (b) What are the main regulations and standards associated with electrical safety? (8)

**Q. 7** (a) Discuss the nine principles of prevention as outlined in the General Applications Regulations 1993. (12)

- (b) Using examples from your site visits; show evidence of these principles at work. (8)

## **Section B**

**Q. 8** In relation to hazardous substances, explain FOUR of the following terms:

- (a) Occupational Exposure Limit (OEL)
- (b) Mutagen
- (c) Lower Explosive Limit
- (d) Flammability range
- (e) Asphyxiant
- (f) Sensitiser (8)

Outline briefly, what kind of information on hazardous chemical substances can be derived from Safety Data sheets. (12)