

**OLLSCOIL NA hÉIREANN, GAILLIMH
NATIONAL UNIVERSITY OF IRELAND, GALWAY**

SUMMER EXAMINATIONS 2002/2003

2nd Year B.Sc Health & Safety Practice IE221

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TIME ALLOWED: Three Hours

Answer Five Questions.

All questions carry equal marks.

Use separate answer books for each Section.

Section A – Health and Safety Management

- Q. 1** a. Draw the diagram showing the Key Elements of a Health and Safety Management System. Discuss in detail any two of the steps in such a system. (10)
b. Describe the key factors to be considered in developing effective organisational communication. Include in your answer practical factors that you would take into account in determining a Health and Safety communications strategy. (10)
- Q. 2** a. Draw a diagram showing the key stages of the Risk Management Process and discuss in detail any one of these stages. (8)
b. What does Hierarchy of Control mean? Explain the different stages of Hierarchy of Control and give examples for each stage. (6)
c. Discuss the factors you would take into consideration when designing Health and Safety training programmes for an organisation. (6)
- Q. 3** Discuss the concept of a Safety Committee, including the minimum conditions for an effective safety committee, working with management, terms of reference of the committee, and the role of a safety committee member. (20)
- Q. 4** You have been asked to develop an accident / incident investigation process for a large multi-national organisation with multiple sites around the world. Describe and discuss the key steps of an effective accident/incident investigation process, which ensures that the real causes of the accident are identified, the appropriate corrective actions are completed and steps are taken to minimise the potential for recurrence of similar incidents within the organisation. (20)

Section B – Health and Safety Practice

- Q. 5**
- a. What is a Safety Statement and why do companies need to prepare one? (6)
 - b. What are the main steps in developing a Safety Statement? Describe in detail three of these steps using examples where appropriate to illustrate your answer. (14)

- Q. 6** You are transporting dangerous goods from Ireland to France. You decide to use a container to transport your dangerous goods, which you have decided are going by road and sea. In this context, answer the following: (5x4)

- (a) What are the 9 classes of Dangerous Goods?
- (b) What regulations governing the transport of dangerous goods would the driver in the above situation be governed by and what documents should he/she carry?
- (c) Describe in detail a dangerous goods note (DGN).
- (d) Describe in detail CPL labelling.

Where appropriate use **good** examples to illustrate your answer.

- Q. 7** Answer **four** of the following five: (4x5)

- (a) What are main classifications of Mechanical Hazards? Use examples where appropriate to illustrate your answer.
- (b) Discuss what controls could be used to prevent Mechanical Hazards? Use examples where appropriate to illustrate your answer.
- (c) Identify the Hazards in Figure 1.
- (d) As the Health and Safety adviser to a pharmaceutical firm you are informed that a number of employees appear to have developed asthma. Describe how you would approach this problem.
- (e) Imagine that you are requested to give a presentation to management on stress in your workplace. Outline the issues you would discuss suggesting potential solutions to problems identified and how management could possibly set about implementing these solutions.

Q. 8 a. Define and write brief notes on three of the following and where possible, give examples of each: **3x5**

- (a) Acute Toxicity
- (b) Chronic Toxicity
- (c) Routes of exposure
- (d) Exposure Limits
- (e) Monitoring and measuring exposure limits
- (f) Reducing exposure to chemicals

b. From the phrases below, match the term on the left with the correct phrase on the right. **(5)**

Note: there are more phrases than terms.

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|-------------------|---|
| 1. Dose | A. Substances that cause destruction of living tissue |
| 2. Acute effect | B. Resulting from repeated exposure over a long period of time. |
| 3. Chronic effect | C. Effects away from the point of entry. |
| 4. Irritant | D. How much of a substance you are exposed to. |
| 5. Corrosive | E. Effects at the point of contact. |
| 6. Sensitiser | F. Resulting from brief exposure. |
| 7. Carcinogen | G. Materials that may cause an allergic reaction in some individuals. |
| 8. Local effect | H. Materials that cause inflammation of the eyes, skin or respiratory system. |
| 9. Remote effect | I. Substances that cause a growth of abnormal tissue or tumours in humans or animals. |
| | J. Substances that affect the reproductive system. |
| | K. Target organ poisons. |