

Undergraduate Diploma in Occupational Health and Safety Intake October 2025

Assessment Task: One written assignment based on chosen questions	
Module: <i>Managing Occupational Health Risks</i>	Tuition Centre: 21 Academy Licence Number: 2018-017
Level: MQF Level 5	Student Name:
Date:	ID Number:
Assignment Deadline: 2 July 2026	
<p>Task</p> <p>This assignment aims to assess your understanding of <i>Occupational Health Risks</i> and your ability to apply effective risk control measures. Through the questions provided, you will analyse common <i>Managing Occupational Health Risks</i> and demonstrate your knowledge of health and safety regulations.</p> <p><i>You should plan to spend approximately 30 hours researching the assignment question, preparing for, and writing the assignment for assessment. The nominal word count for the assignment is 2,400 words.</i></p> <p><i>Please ensure that you refer to 21 Academy's Assignment Guidelines for comprehensive information regarding the submission of your assignment. Additionally, the assignment submission form must be included with your completed work, clearly indicating which question you have chosen to answer by ticking the box next to the question number.</i></p>	
<p>Answer 1 (one) question from the following:</p> <p>☐ Question 1: The "Nuclear Vision Hotel"</p> <p>Scenario:</p> <p>You are an occupational health advisor for Nuclear Vision, a 5 star large luxury hotel. Recent health authority investigations confirmed "Legionella" bacteria in the water system, causing illness among guests. This crisis has exposed deeper, chronic issues.</p> <p>Furthermore, housekeeping staff report high rates of back, neck, and knee pain from prolonged standing, bed-making, and bathroom cleaning. Kitchen staff suffer from cuts, burns, exhaustion and musculoskeletal discomfort from repetitive tasks and awkward postures. Many workers report high stress levels due to workload pressures and shift demands. At the workplace, there is no health surveillance program. Worker complaints are handled informally by department heads.</p> <p>Questions:</p> <ol style="list-style-type: none"> 1. Hazard Identification and Routes of Exposure: Identify three different types of health hazards present in the hotel (one biological, one ergonomic, and one psychosocial). For each hazard, explain in detail how workers are exposed and what body systems or organs could/are being affected.(30%) 2. Health Surveillance and Worker Consultation: What is health surveillance and why is it important? Explain what types of health checks would be appropriate for housekeeping staff and kitchen staff. Why should management consult with workers when designing health programs? (30%) 3. Control Measures and Prevention: Choose one ergonomic hazard affecting housekeeping staff. Using the Hierarchy of Controls in detail, suggest practical measures at four different levels (e.g., engineering, administrative, PPE) to reduce the risk. Explain why relying only on training or PPE is not enough. (40%) <p>☐ Question 2: North Sea Petroleum" Offshore Platform</p> <p>Scenario:</p> <p>You are a new Occupational Health and safety Officer for "North Sea Petroleum," an offshore oil and gas platform. Over the past two years, 37 workers sought medical attention after reporting headaches, nausea,</p>	

and dizziness in processing areas. These incidents were linked to venting from chemical storage tanks during adverse wind conditions.

A review of records reveals concerns about long term exposures. Maintenance workers may be exposed to asbestos insulations during refurbishment work. Process operators face regular exposure to hydrocarbon vapour including benzene. Welders are exposed to fumes and high noise levels over a prolonged period of time. Health surveillance program are non existent. Exposure surveillance monitoring is carried out only occasionally. Recent industry research suggests possible links between petroleum work and lung problems, liver effects, and skin conditions.

Questions:

1. Acute Exposure Incidents: Describe what happened during the chemical vapor exposure incidents. What are the routes of exposure and what acute health effects did workers experience? Why is it important to investigate and record these incidents properly? (20%)
2. Long-term Health Risks and Health Surveillance: Identify three long-term health risks for different worker groups on the platform (e.g., process operators, maintenance workers, welders). For each group, explain in detail what type of health surveillance would be appropriate and why early detection is important. (20%)
3. Applying the Hierarchy of Controls: Choose 3 hazards from the scenario (e.g., welding fumes, noise, or hydrocarbon vapor exposure). Apply the Hierarchy of Controls for each one by suggesting at least three practical measures at each level (elimination, substitution, engineering, administrative, PPE). Explain why higher-level controls are preferred over PPE. (60%)



Question 3: "Sonik Airways" Fume Events

Scenario:

You are a Health and Safety Manager for "Sonik Airways." Sonik Airways operates a fleet comprising three different aircraft types: 12 Airbus A320-200, 15 Boeing 737-800, and 4 Airbus A340-600. Over the past four and a half years, several A320 pilots and cabin crews have reported health problems following "fume events" incidents where oil leaks into engine bleed air, potentially introducing contaminants into cabin air.

Affected crew report symptoms during flights including dizziness, nausea, confusion, and difficulty concentrating. Some report ongoing issues such as memory problems, fatigue, and headaches. Maintenance protocols allow planes with minor fume odours to continue flying without immediate inspection. However, Scientific evidence is mixed: some studies find no long-term effects, while case reports document significant health problems in affected crew. The unions have expressed their concern and are calling for immediate action, while warning that they may resort to industrial action. Management is unsure how to act.

Questions:

1. Understanding the Hazard: What are fume events and how might they expose crew to harmful substances? Identify the plausible potential routes of exposure and the types of symptoms (acute and chronic) that crew members have reported. Why is this hazard difficult to recognize and manage? (15%)
2. Epidemiology and Investigating Health Patterns: Management wants to understand if fume events are genuinely causing health problems. Explain how a simple cross-sectional study could help investigate this. What groups would you compare, what data would you collect, and what are the limitations of this type of study? (25%)
3. Reporting Systems and Health Surveillance: Design a reporting system for crew who experience symptoms during or after flights. What information should be collected and why? Additionally, propose a basic health surveillance program for pilots and cabin crew who have been involved in fume events. What types of health checks would be appropriate and how would this data help protect workers in the future? (60%)

Pass Mark of total weighted score, including Presentation and Self-Assessment - 50%	Assignment weighted score 60%
By submitting I confirm that this assessment is my own work	
Mark:	Signature: <main assessor>
Date	Signature: <quality assurance>