

NEBOSH

MANAGEMENT OF HEALTH AND SAFETY

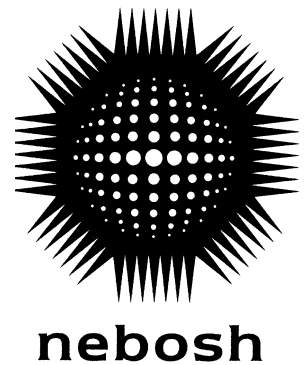
UNIT IG1:

For: NEBOSH International General Certificate in Occupational Health and Safety

MANAGEMENT OF INTERNATIONAL HEALTH AND SAFETY

UNIT IGC1:

For: NEBOSH International General Certificate in Occupational Health and Safety
NEBOSH International Certificate in Construction Health and Safety
NEBOSH International Certificate in Fire Safety and Risk Management



Open Book Examination

Available for 24 hours

Guidance to learners

This is an open book examination. It is not invigilated, and you are free to use any learning resources to which you have access, eg your course notes, or a website, etc.

By submitting this completed assessment for marking, you are declaring it is entirely your own work. Knowingly claiming work to be your own when it is someone else's work is malpractice, which carries severe penalties. This means that you must **not** collaborate with or copy work from others. Neither should you 'cut and paste' blocks of text from the Internet or other sources.

The examination begins with a realistic scenario to set the scene. You will then need to complete a series of tasks based on this scenario. Each task will consist of one or more questions.

Your responses to **most** of these tasks should wholly, or partly, draw on relevant information from the scenario. The task will clearly state the extent to which this is required.

The marks available are shown in brackets to the right of each question, or part of each question. This will help guide you to the amount of information required in your response. In general, one mark is given for each correct technical point that is clearly demonstrated. Avoid writing too little as this will make it difficult for the Examiner to award marks. Single word answers or lists are unlikely to gain marks as this would not normally be enough to show understanding or a connection with the scenario.

You are **not** expected to write more than 3000 words in total.

Try to distribute your time and word count proportionately across all tasks.

It is recommended that you use the answer template.

Please attempt **ALL** tasks.

SCENARIO

Following a serious and well publicised accident, you have been newly recruited as a Health and Safety Advisor at a bakery organisation. The organisation employs directors, shift managers, maintenance engineers and bakery workers.

The organisation produces bread on a large scale using automated machinery. Ingredients are mixed together to make a dough. The dough is placed in baking tins on a conveyer which travels through an oven, baking the dough into bread. There are three large bread ovens at the bakery, as well as other machinery used to prepare the dough. This is all housed in a large warehouse.

The bread baking ovens are long, metal-encased tunnels with a conveyor running through them. The conveyor is made up of horizontal racking, bolted through metal plates at either end of the conveyor chain. The conveyor is approximately 20 metres long and 3.3 metres wide (approximately 66 x 11 feet), taking up virtually the whole of the width of the oven. The bread dough is placed in tins that enter on one end of the conveyor, travel along the length of the oven and exit at the opposite end. Travelling at its fastest speed, the tins take 17 minutes to pass through the oven.

The directors do not believe that health and safety is a full-time job, but they hope that you will improve the bakery's health and safety performance, learn lessons from the recent serious accident and, most importantly, improve the reputation of the organisation. They have told you that there is no budget for health and safety, but if something is needed, you should present an argument for how it will improve profit. You ask who the health and safety representatives are within the organisation and are told that there are none with whom to raise specific safety issues. However, if a machine needs to be fixed you should contact the maintenance engineer.

You also ask if any health and safety training is provided to staff and are advised that as far as training is concerned, there is an induction for new starters within six weeks of joining the organisation. New starters are then shown how to carry out their role by someone else in the relevant department. You are told that quite a lot of people have received first-aid training, but it was a long time ago and many of those trained have since left the organisation. Other than that, there is not much in the way of training, because the directors feel it is wasting working time. Finally, you ask where the health and safety documentation is kept but they say that they do not know, and suggest you ask the shift manager on duty.

The duty shift manager is sitting at their desk surrounded by paperwork, looking stressed. You introduce yourself and ask where the health and safety documentation is kept. The shift manager pulls out a folder from a cupboard in the corner of the room and says that risk assessments are in it. You find several completed risk assessments for the ovens and other machinery, but they are very out of date. You ask to see the accident and near miss records, but the shift manager advises that accidents do not happen often, so there is no need to keep a manual record. However, you have heard from the other workers that accidents and near misses frequently occur, but that they are not formally reported.

You ask where the inspection and maintenance documentation for the bakery machinery is kept and are directed to the maintenance engineer. The maintenance engineer explains that they do not keep a record of inspections and maintenance other than in their work diary, and that they can see when a machine was last used from that diary. They have been doing the job for over 15 years and 'just know' which machines have had work done to them. When they are working on a machine, they check certain parts at the same time. They also remark that as the machines are quite old, they frequently need parts replacing. The workers have been promised new machines a few times, but these promises have not been kept.

The recent accident

As part of your remit to learn lessons from the recent serious accident, you decide to investigate what happened. Your enquiries reveal that the accident occurred when the bakery was under pressure to get an urgent order completed. You find out that the directors often allow workers to cut corners

when it comes to safety measures, to enable them to get the job done as quickly as possible and without costly delays. Workers are often individually blamed if target timelines are not reached.

This is how the accident happened. On a night shift, the conveyor racking collapsed into one of the ovens stopping it from moving. The maintenance engineer, usually assigned to fix breakdowns, only worked day shifts. Waiting for this engineer to come back on shift would have caused significant downtime, and would have prevented the order from being completed on time. Feeling under pressure, the shift manager on duty discussed the issue with their team to try to get the oven back up and running. It was decided that a newly promoted maintenance engineer and another young worker were assigned to enter the bread oven to retrieve the fallen racking themselves. No-one on the night shift had ever been present when an oven had needed entering before. The correct way to enter the oven for maintenance work would have been to remove the side panels. However, this would have taken a long time, as specialist tools that they were unfamiliar with, would have to be found and used.

The oven had only been switched off for two hours, but it was assumed that it was cool enough to enter. The temperature gauges were not checked before entering. The two workers decided to enter via the route the bread would take on the moving conveyor. They managed to get on the conveyor through a small unguarded gap.

Once the workers had entered the oven, they soon realised it was too hot. They were unable to get the attention of their colleagues outside of the oven, but eventually managed to alert them by shouting for help. Their colleagues tried to get them out of the oven, but they did not know how to do this, or locate how far they were inside the oven. Everyone was frantically trying to help but there seemed to be no-one in charge to take control of the situation. As a result of this, there was a delay in getting them out. There was no way to reverse the conveyor belt, so the workers had to forcibly pull off barriers and side panels to help them escape. Both workers who entered the oven suffered serious burns. Workers at the scene were not first-aid trained but did their best to help their colleagues. Unfortunately, both workers died from their injuries at the scene. The workers who helped get them out were traumatised by what they had witnessed and had to take extended periods off work to recover. There were also some workers who felt they could no longer work at the bakery and resigned.

Following the accident, the bakery was closed for two weeks while an investigation took place. The associated downtime caused many missed production deadlines and loss of contracts. The organisation, the directors and duty shift manager were all prosecuted for breaches of health and safety legislation. They pleaded guilty to all the counts against them. The organisation was fined £350 000 and ordered to pay costs of £250 000. Since the accident, the bakery has lost bread orders due to clients not wanting to be associated with them.

Task 1: Obligations of employers to workers

- 1 What *employer* obligations to workers are likely to have been contravened, leading to the accident in this scenario? (10)

You only need to consider those obligations placed upon employers under Recommendation 10 of International Labour Organisation R164 - Occupational Safety and Health Recommendation, 1981 (No. 164).

Note: *You should support your answer, where applicable, using relevant information from the scenario.*

Task 2: Influencing health and safety culture

- 2 To improve health and safety performance in the organisation, you know that you need to influence health and safety culture.

What appear to be the *negative* indicators of health and safety culture at the bakery? (15)

Note: *You should support your answer, where applicable, using relevant information from the scenario.*

Task 3: Financial arguments to improve health and safety

- 3 Based on the scenario only, what financial arguments in relation to accidents, could you use to convince the directors that health and safety needs to be improved? (10)

Task 4: Investigating incidents

- 4 You advise the directors that the organisation should carry out some health and safety performance monitoring.

Comment on the *reactive* (lagging) monitoring measures that could be put in place by the organisation. (10)

Note: *You should support your answer, where applicable, using relevant information from the scenario.*

Task 5: Prioritising health and safety issues

- 5 You have decided to form a health and safety committee to help improve health and safety at the organisation.

Based on the scenario only, identify TEN health and safety issues that the committee should prioritise at their first meeting. (10)

Task 6: Training recommendations

- 6 Based on the scenario only, what training should the bakery arrange for the different types of workers, to make a repeat of the recent accident less likely? (10)

Task 7: Emergency procedures

- 7 (a) Why do emergency procedures need to be developed? (5)
- (b) What could have contributed to the failure of the emergency arrangements when dealing with the recent accident? (15)

Note: You should support your answers, where applicable, using relevant information from the scenario.

Task 8: Setting suitable health and safety targets

- 8 You propose a health and safety target to help improve health and safety management system performance. You formulate the target action table below.

Target	Actions required	Who is responsible	Timeframe for actions
Reduce recorded accidents by 50%	Monitor accident statistics on a monthly basis Train workers on accident reporting	Top management	12 months

- Comment on the suitability of the target action table in helping to improve health and safety management system performance. (15)

End of examination

Now follow the instructions on submitting your answers.