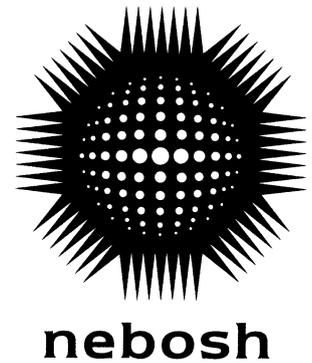


NEBOSH

**KNOW - WORKPLACE HEALTH AND SAFETY
PRINCIPLES (INTERNATIONAL)**



UNIT ID1:

For: **NEBOSH International Diploma for Occupational Health and Safety
Management Professionals**

PAPER 1 OF 2

Guidance to learners

There are **two** question papers for this assessment. This paper (**Paper 1 of 2**) contains the following assessment part:

- Part 1 contains questions based on a fictitious, but realistic scenario (150 available marks).

All the tasks and activities in all parts of the assessment are mandatory.

You will have 6 weeks (30 working days) to complete **both papers/all four parts** of the assessment.

Please refer to your registration confirmation email for the upload deadline.

Please note that NEBOSH will be unable to accept your assessment once the deadline has passed.

You **must** use the answer template for **Paper 1**.

This assessment is not invigilated, and you are free to use any learning resources to which you have access, eg your course notes, or the HSE 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.

Part 1: Scenario-based questions

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.

Please attempt **ALL** tasks.

SCENARIO

A national online retailer has two sites that are approximately 200 miles (approximately 322 km) apart. Both premises are identical, very large warehouse buildings of approximately 45 000 square feet (4 180 square metres) each, with an additional separate office block adjoining the warehouse. There are 20 loading bays at the rear of the warehouse, and at the front there is a car park, with approximately 150 spaces.

Each site employs 600 workers (1 200 in total over the two sites). There is a wide variety of job roles including pickers, packers, dispatchers, maintenance workers, drivers, banksmen, finance, sales, purchasing, website developers, IT analysts, general administrators, etc. In addition, the workforce has 4 health and safety representatives (split equally between the two sites). The organisation considers this a suitable number of representatives, as risks are generally well controlled and there are few incidents or complaints from workers. The organisation operates 24 hours a day, 7 days a week (except for four national holiday dates). There is a shift system in operation for the warehouse workers where they work for 4 days and then have 3 days off. The office workers are employed on a Monday – Friday contract.

The country where the retailer operates has just introduced a new piece of health and safety legislation that requires organisations to comply with specific requirements. For example, all organisations are required to clean their floors at least once a week, carry out workplace inspections at least quarterly, carry out risk assessments every 18 months, must have at least one health and safety representative per 200 workers, as well as many other requirements. The organisation is currently putting systems in place to help ensure that they comply with this legislation.

The organisation was first established 30 years ago by two siblings. Approximately 10 years after the organisation started it moved into new premises. The growth of the internet, and shopping trends moving online, meant that the retailer's turnover has grown to be 50 times larger. The retailer, therefore, had to move premises again 10 years ago; this time moving into the current buildings that were purpose-built. Even with this growth, the organisation is still family owned and is run by a managing director (MD) and a Board of ten other directors. The MD is one of the original founding siblings. There are three other family members on the Board; the other Board members come from outside of the organisation. The Board has also appointed one of their members to act as health and safety champion, as they had carried out a similar role in other organisations. Over the past few years, the organisation has turned down three buy-out offers. The MD and Board are keen to retain the 'family' ethos and like to think that all workers regard the organisation as their 'work family'.

The online retailer bulk buys general goods (such as domestic and industrial cleaning products, electrical equipment, stationery, clothing, ornaments, candles, etc) from other organisations, and then resells them through their own website at a discounted price. The organisation, therefore, handles a lot of used and new packaging that creates large volumes of dust. Incoming goods are moved from

lorries into storage through bays 1 to 10 at both sites. Orders are 'picked' using robots, or manually by workers; bulky orders are moved around the warehouse using forklift trucks (FLT) driven by trained FLT drivers. Orders are dispatched through bays 11 to 20.

You are the group health and safety manager and are responsible for health and safety at both sites. You are mainly based at Site A, and travel to Site B five or six times a month. Both sites have suitably qualified and experienced health and safety teams in place to manage day-to-day health and safety issues. You have been in the post for six years. You are highly qualified in health and safety and have worked in similar positions for the last 10 years. When you were initially employed, the MD told you that they wanted to "do the right thing" when it came to looking after the health and safety of the workers. This was evident from the amount of times that the organisation goes beyond what is a minimum legal requirement. For example, the employer pays into a national 'employers' no-fault compensation scheme'. For organisations the size of the online retailer, it is a legal requirement to pay into the scheme a minimum of 0.025% of turnover per 100 workers; the organisation has decided to pay in 0.075% of turnover by 100 workers. You were given freedom to make any changes that you felt were necessary or would improve the workplace.

When you first joined the organisation, you noticed that the safety culture was good. However, there were various areas that could be improved and you decided to monitor this to make sure that standards did not drop.

Recently, you have noticed more incident investigation reports coming to you for review. You note that the root cause(s) in the majority of these reports is given as 'human failures'. Therefore, you decide to carry out a review of the health and safety management system to help ensure that it is still working effectively.

One of the first things that you note is that the organisation seems to be focused on policies and procedures. Even though most of these have recently been reviewed and updated, you find little evidence that the workforce were consulted as part of the process. The same applies to the many safe systems of work (SSoW) that are in place; they are regularly reviewed but workers are not consulted on any changes. In both cases, it appears that the documentation was written by managers who are not familiar with the detail of the work actually carried out in those working areas.

Printed copies of all policies, procedures and SSoW are stored on a shelf in the main warehouse area. You suspect that workers are not familiar with these documents.

To check this, you select two SSoW at random from the shelf and go to speak to the workers at both sites involved in the relevant processes. In both cases the workers were aware of the existence of the SSoW but did not follow them. When asked why, the majority of workers reply that these systems are how the organisation thinks it should operate safely, and not what actually happens. In reality, the heads of departments at Site A had agreed that there were changes that could be made. This would make the job more efficient but equally safe. These changes were implemented a few years ago, but they did not tell anyone about it.

While you are with the workers at Site A you observe their working practices. They all seem to work well together and the work is done efficiently and safely, just as the workers had said. You also speak to the workers about the training they receive. They tell you that they have all received training for their role and some of the workers have been given additional specific health and safety training. None of them have received training on the policies and procedures or the SSoW.

You then review the risk assessment programme for both sites to make sure that these are still appropriate. You conduct a thorough review and implement a revised programme to help ensure that specific and general health and safety risk assessments are conducted at least yearly.

You are currently trying to introduce proactive safety management. You have already briefly discussed this with the directors and they like the idea but need more information. However, they have said that they will give you the necessary resources (which will include training workers on changes to their jobs if necessary) and support, if you can put together a convincing business case.

A few weeks have passed by when you receive a phone call at home one Monday morning. The call is from one of the health and safety team members at Site B; they tell you that there has just been a serious accident on site. You instruct them to set up a conference call, in an hour's time, to discuss the full details of the accident with you. You will take the conference call in one of the conference rooms at Site A.

On the conference call, you are told that one of the warehouse workers has been seriously injured. The team explains that the accident happened just after 07:00; an incoming truck was reversing onto bay 6 to unload. The banksman, who usually works on bays 1 – 10, was unexpectedly absent due to illness, and the worker who would normally cover the sickness absence was out of the country on annual leave.

The local management at the site had been working on a plan for cover of workers but could not agree on which recruitment agency to use, as several members of the team had different preferences. The policy was therefore left for discussion at a later date and never finalised.

The site manager did not know what to do in the banksman's absence so they persuaded a young apprentice warehouse worker to cover for the absent worker. The apprentice agreed, as they wanted to fit in and make friends. A banksman, who covers bays 11 – 20, said they would show the worker what to do and supervise them until the apprentice felt confident to do the job by themselves. The banksman viewed a digital version of the procedure document on their electronic tablet computer and talked the apprentice through each stage of the job. The apprentice found it quite difficult to read what was on the tablet; reading was not their strong point and they much preferred 'learning by doing' the job. However, before the apprentice could put the procedure into practice, the banksman was called away to an incident on bay 16 that needed their attention. The banksman told the apprentice that a truck was not expected for another 20 minutes. If one did arrive early the apprentice should tell the driver to park in the 'waiting bay' at the front of site. The banksman would then come back to help the apprentice with the first reversing procedure. The banksman then left, taking the electronic tablet computer with them.

A truck arrived earlier than anticipated. The apprentice explained the situation and asked the driver to park for a few moments. The driver was annoyed by this and said that they were on a very tight schedule to meet targets for the day, so really needed to unload the trailer immediately. They also said that if they were late for any of their deliveries they would lose their bonus. The apprentice, not wanting to upset anybody, and trying to be helpful, thought about it for a moment and decided that the job could not be that difficult. They decided to direct the driver towards the bay.

While the truck was reversing, the apprentice received and viewed several picture messages on their mobile phone. They knew from their induction training that this is prohibited during working hours. They were distracted while viewing the picture messages and had forgotten about the truck. The truck subsequently reversed into the bay wall, much of which was demolished.

At the same time, an experienced warehouse worker (they had been employed for five years by the online retailer) decided to take a shortcut to get to the dispatch area to resolve an urgent issue. The shortcut would take them past the loading bays instead of around the separate pedestrian walkway. This would save them valuable time as they were near the end of their shift. They knew that this was against the rules as this was always emphasised in the annual site health and safety training.

The walkway is clearly marked out and there are signs located at various points around the site telling workers they must use the walkway. Before the accident, the warehouse worker was listening to their favourite song through their headphones while walking. The organisation prohibits the wearing of headphones on site, but the worker thought they could get away with it as there were not many people around; if they were seen it was unlikely that other workers would say anything. The worker closed their eyes for a few seconds to appreciate the song while they were walking between bays 6 and 7; they did not see or hear the reversing truck until it was too late. The driver did not see the worker in their mirrors as the worker was in the driver's blind-spot by this time. The worker was

hit by the truck and sustained serious injuries. An ambulance was immediately called and first aid was given until the ambulance arrived.

The injured worker has been taken to hospital but the extent of their injuries is unknown. The driver was uninjured, however they were extremely traumatised and therefore sent to hospital as a precaution. The young apprentice is also traumatised and seems to be in shock. The apprentice has been sent home and HR will contact them to discuss support for their return to work. You tell the team to start an investigation and that you will drive over to Site B shortly to assist.

Before you leave for Site B, you phone the MD and tell them about the accident. You tell them that you are on your way to the site of the accident very shortly. The MD is extremely distressed by this news (this is the first time such a serious accident has happened) and tells you that they will meet you there as soon as they can. They also ask about the injured worker; you tell them you have no further information at the moment. You tell the MD that, before going to the warehouse, you will visit the hospital to offer support to the worker's family and to see what more you can find out. The MD tells you to provide as much support as possible at the organisation's expense.

On arrival at the hospital, you find the injured worker in a ward with very little privacy. You speak to the worker and their family and find out that, while the injuries are serious, they are not life-threatening. The worker sustained broken limbs, cuts and bruises, and has had successful surgery to stop an internal bleed. They are expected to make a full recovery. You ask the worker's family how long the worker is likely to be in hospital for. They tell you that the doctors have advised a minimum of a month in hospital with intensive physiotherapy once they have been discharged. It will be at least six months before they can return to work and then they will only be able to perform light duties. You assure the worker's family that the worker will receive full pay while they are off work, and the organisation will pay for any necessary medical treatment. You also tell the worker that they will be transferred to a specialised hospital that the organisation will pay for. The worker and their family are very grateful for this.

As you are walking back to your car, you ring the MD to update them on the worker's injuries. The MD is pleased that the worker will recover and say that they will be at Site B in a few hours. You drive the short distance from the hospital to the warehouse where the health and safety team take you to the accident site.

The team brief you on the actions taken so far (including the recording and reporting of the accident to the regulatory authority) which you agree with. The team provide you with a draft accident investigation report within the next 72 hours.

Task 1: Socio legal models

- 1 The retailer's country of operation has recently brought in some prescriptive health and safety legislation. (10)
- (a) Comment on the limitations of this type of legislation for the retailer. (10)
- Note: You should support your answer, where applicable, using relevant information from the scenario.*
- (b) The injured worker approaches the online retailer to discuss compensation for the injuries received in the reversing accident. (15)
- (i) What would you tell the worker about the compensatory scheme that the online retailer uses? (15)
- The injured worker is not happy with the level of compensation received and has decided to sue the organisation.
- (ii) Assuming that a judge rules in favour of the worker, what damages is the injured worker likely to receive? (10)
- Note: You should support your answer, where applicable, using relevant information from the scenario.*

Task 2: Causes of human failures (HSG48)

- 2 (a) Identify the *different types* of errors and violations made by **EACH** of the individuals involved in the events leading up to the accident. (12)
- Note: You should support your answer, where applicable, using relevant information from the scenario.*
- (b) Comment on
- (i) the *job* factors that could have contributed to the accident. (7)
- (ii) the *individual* factors that could have contributed to the accident. (6)
- Note: In (b) (i) and (b) (ii) you should support your answer, where applicable, using relevant information from the scenario.*

Task 3: Competence

- 3 Comment on the health and safety competence in the organisation. (10)
- Note: You should support your answer, where applicable, using relevant information from the scenario.*

Task 4: Proactive safety management

- 4 What difference would a proactive safety management system make to the organisation? (25)
- Note: You should support your answer, where applicable, using relevant information from the scenario.*

Task 5: Key principles of managing organisational change

- 5 Assume that the Board of directors have agreed to the proactive management system being implemented.

What are the *key principles* that should be considered to manage this change effectively? (25)

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

Task 6: Latent and active failures (Swiss cheese model)

- 6 (a) Comment on the likely latent failures that led to the accident. (8)

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

- (b) Figure 1 (below) is a Swiss Cheese model showing the main causes of the accident.

Label the different parts of the diagram, giving an explanation of the label, including an example from the scenario where required. (22)

Note: You **must** use Table 1 in the answer template to structure your answers. The number of examples required are indicated by the instructions included in the table column 'Relevant example(s) from scenario'.

