

January 2013

Examiners' Report

NEBOSH National Diploma in Occupational Health and Safety - Unit A



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NEBOSH NATIONAL DIPLOMA IN OCCUPATIONAL HEALTH AND SAFETY

Unit A: Managing health and safety

JANUARY 2013



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Introduction

NEBOSH (The National Examination Board in Occupational Safety and Health) was formed in 1979 as an independent examining board and awarding body with charitable status. We offer a comprehensive range of globally-recognised, vocationally-related qualifications designed to meet the health, safety, environmental and risk management needs of all places of work in both the private and public sectors. Courses leading to NEBOSH qualifications attract around 35,000 candidates annually and are offered by over 500 course providers, with exams taken in over 100 countries around the world. Our qualifications are recognised by the relevant professional membership bodies including the Institution of Occupational Safety and Health (IOSH) and the International Institute of Risk and Safety Management (IIRSM).

NEBOSH is an awarding body to be recognised and regulated by the Scottish Qualifications Authority (SQA).

Where appropriate, NEBOSH follows the latest version of the “GCSE, GCE, *Principal Learning and Project Code of Practice*” published by the regulatory authorities in relation to examination setting and marking. While not obliged to adhere to this code, NEBOSH regards it as best practice to do so.

Candidates’ scripts are marked by a team of Examiners appointed by NEBOSH on the basis of their qualifications and experience. The standard of the qualification is determined by NEBOSH, which is overseen by the NEBOSH Council comprising nominees from, amongst others, the Health and Safety Executive (HSE), the Confederation of British Industry (CBI), the Trades Union Congress (TUC) and the Institution of Occupational Safety and Health (IOSH). Representatives of course providers, from both the public and private sectors, are elected to the NEBOSH Council.

This report on the examination provides information on the performance of candidates which it is hoped will be useful to candidates and tutors in preparation for future examinations. It is intended to be constructive and informative and to promote better understanding of the syllabus content and the application of assessment criteria.

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General comments

Many candidates are well prepared for this unit assessment and provide comprehensive and relevant answers in response to the demands of the question paper. This includes the ability to demonstrate understanding of knowledge by applying it to workplace situations.

There are always some candidates, however, who appear to be unprepared for the unit assessment and who show both a lack of knowledge of the syllabus content and a lack of understanding of how key concepts should be applied to workplace situations.

In order to meet the pass standard for this assessment, acquisition of knowledge and understanding across the syllabus are prerequisites. However, candidates need to demonstrate their knowledge and understanding in answering the questions that are asked. Referral of candidates in this unit is invariably because they are unable to write a full, well-informed answer to one or more of the questions.

Some candidates find it difficult to relate their learning to the questions and as a result offer responses reliant on rote learning and conjecture and fail to demonstrate a sufficient degree of understanding. Candidates should prepare themselves for this vocational examination by ensuring their understanding, not rote-learning pre-prepared answers.

Candidates should therefore note that Examiners' Reports are **not** written to provide 'sample answers' but to give examples of what Examiners were expecting and more specifically to highlight areas of under-performance.

Common pitfalls

It is recognised that many candidates are well prepared for their assessments. However, recurrent issues, as outlined below, continue to prevent some candidates reaching their full potential in the assessment.

- Many candidates fail to apply the basic principles of examination technique and for some candidates this means the difference between a pass and a referral.
- In some instances, candidates do not attempt all the required questions or are failing to provide complete answers. Candidates are advised to always attempt an answer to a compulsory question, even when the mind goes blank. Applying basic health and safety management principles can generate credit worthy points.
- Some candidates fail to read the question properly, resulting in them providing information that, although of general relevance to the topic as a whole, is irrelevant to the question. Such answers cannot be awarded marks.
- Many candidates fail to apply the command words (also known as action verbs, e.g. describe, outline, etc). Command words are the instructions that guide the candidate on the depth of answer required. If, for instance, a question asks the candidate to 'describe' something, then few marks will be awarded to an answer that is an outline. Similarly the command word 'identify' requires more information than a 'list'.
- Some candidates fail to separate their answers into the different sub-sections of the questions. These candidates could gain marks for the different sections if they clearly indicated which part of the question they were answering (by using the numbering from the question in their answer, for example). Structuring their answers to address the different parts of the question can also help in logically drawing out the points to be made in response.
- Candidates need to plan their time effectively. Some candidates fail to make good use of their time and give excessive detail in some answers leaving insufficient time to address all of the questions.
- Candidates should also be aware that Examiners cannot award marks if handwriting is illegible.

- Candidates should note that it is not necessary to start a new page in their answer booklet for each section of a question.

UNIT A – Managing health and safety

Section A – all questions compulsory

Question 1 *A warehouse employee whose normal work involves lifting and carrying loads sustained a back injury in an accident at work on a Friday morning.*

The employee's doctor has advised him to rest over the weekend. The doctor has confirmed that the employee can return to work on Monday (ie 3 days after the accident), but that he must restrict himself to light duties for a further seven days.

- (a) **Outline** the statutory requirements for reporting this accident. (6)
- (b) **Identify** the maximum fines that courts could impose for a failure to report the injury **AND name** the courts in which such fines could be levied. (4)

This question related to Elements 2 and 9 of the syllabus and assessed candidates' knowledge of learning outcomes 2.3: *Explain the statutory and the internal reporting and recording systems for injuries, ill-health, dangerous occurrences and near misses* and 9.3: *Explain the responsibilities and powers of enforcing agencies and officers and the range of options related to enforcement action, their implications and appeal procedures.*

Part (a) was fairly well answered with most candidates showing an awareness of the changes to RIDDOR and the new 'over 7-day' reporting requirements. However, some candidates were apparently unaware of the changes and referred to the old 'over 3-day' criteria. Other candidates erroneously thought that the employee had suffered a major injury and incorrectly proceeded on that basis. Only a few candidates made explicit reference to the fact that, for reporting purposes, the day of the accident is not counted but rest days are.

In response to part (b) there were many vague answers on courts and levels of fines. Some references were made to the civil courts, showing a clear misunderstanding of the basics of the legal system, whilst opinions on fines ranged from £5000 to £50,000. References to custodial sentences were not required.

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- Question 2** *An advertising campaign was used to promote improvement in safety standards within an organisation. During the period of the campaign the rate of reported accidents significantly increased and the campaign was considered to be a failure.*
- (a) **Outline** reasons why the rate of reported accidents may have been a poor measure of the campaign's effectiveness. (2)
- (b) **Outline FOUR** proactive (active) monitoring techniques that might be used to assess the organisation's health and safety performance. (8)
-

This question related to Element 3 of the syllabus and assessed candidates' knowledge of learning outcomes 3.2: *Explain the need for, and the objectives and limitations of, health and safety monitoring systems* and 3.3: *Describe the variety of monitoring and measurement techniques*.

Part (a) was well answered for the two marks that were available. Most candidates were able to refer to increased awareness, although fewer were able to point to other relevant factors such as previous under-reporting.

Answers to part (b) were limited, with many candidates seemingly unable to differentiate between different active monitoring techniques or to give more than a list. There were occasional references to risk assessment and permits-to-work, neither of which are active monitoring techniques. On a positive note, few candidates made reference to reactive monitoring. Candidates with a good grasp of active monitoring methodologies gave detailed and accurate responses.

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- Question 3** *A maintenance employee was asphyxiated while working within an emptied fuel storage tank. A subsequent investigation found that the employee had been operating without a permit-to-work, despite it being an organisational requirement for this type of task.*
- (a) **Outline** why a permit-to-work would be considered necessary in these circumstances. (3)
- (b) **Outline** possible reasons why the permit-to-work procedure was not followed on this occasion. (7)
-

This question related to Element 5 of the syllabus and assessed candidates' knowledge of learning outcome 5.3: *Explain the development, main features and operation of safe systems of work and permit-to-work systems*.

In part (a) several candidates failed to note that this part of the question carried only 3 marks and so wrote at length on ancillary issues, such as the content of a permit form. Careful reading of the question could have prevented this. Most candidates recognised that confined space entry is high risk work although few were able to say too much more beyond this.

Part (b) was misread by some candidates who proceeded to describe what should be on a permit form or to explain how a permit system operates rather than answering the question that was asked. Candidates who considered an even balance of human, job and organisational factors generally fared quite well.

Question 4 *Regulation 3(1) of the Management of Health and Safety at Work Regulations 1999 states (in part) that:*

*“Every employer shall make a suitable and sufficient assessment of –
(a) the risks to the health and safety of his employees to which they are exposed whilst they are at work”.*

(a) **Outline** a range of factors that must be considered in order to produce a ‘suitable and sufficient’ risk assessment. **(6)**

(b) **Outline** the actions that an enforcing authority inspector may take in the event that risk assessments are not suitable and sufficient. **(4)**

This question related to Elements 4 and 9 of the syllabus and assessed candidates’ knowledge of learning outcomes 4.3: *Explain how to assess and evaluate risk and to implement a risk assessment programme* and 9.3: *Explain the responsibilities and powers of enforcing agencies and officers and the range of options related to enforcement action, their implications and appeal procedures.*

In part (a) it was clearly evident that many candidates had not read the Approved Code of Practice to Regulation 3 and so were unaware of what constitutes a suitable and sufficient risk assessment. Many candidates gave answers based around the simple ‘5 Steps’ approach, which failed to encompass the range of points covered in the ACoP.

Part (b) answers were limited. Responses lacked detail with only a very few candidates being able to go beyond the issuing of notices to consider other actions such as formal cautions. Some candidates listed the powers of an Inspector for which no marks could be awarded.

Question 5 *The senior management of an organisation needs to introduce a number of new, safer working procedures but has met with resistance from the workforce.*

Outline the steps that managers could take to gain the support and commitment of staff when introducing the changes. **(10)**

This question related to Element 6 of the syllabus and assessed candidates’ knowledge of learning outcome 6.7: *Outline the factors which can both positively and negatively affect health and safety culture.*

Answers were of variable quality with a proportion of candidates giving simple lists of points rather than the more detailed outline that was required. There was a tendency to reiterate points, notably on the topic of consultation. Weaker responses focussed unduly on incentives and discipline to the exclusion of other worthy points. Those who approached the problem in a logical manner, for example by applying basic management of change principles, tended to fare better than those who adopted a less logical approach.

Question 6 *Health and safety is only one aspect of organisational risk management.*

- (a) **Identify THREE** other areas of risk that organisations may need to consider **AND give ONE** example of **EACH**. (3)
- (b) **Outline** how an organisation can raise the profile of health and safety so that it is considered with equal importance to other areas of risk. (7)
-

This question related to Element 1 of the syllabus and assessed candidates' knowledge of learning outcome 1.3: *Explain the principles and content of effective health and safety, quality, environmental, and integrated management systems with reference to recognised models and standards.*

Part (a) was quite well answered with many candidates identifying a range of risks to which an organisation may be susceptible. Many candidates misread or misunderstood the question in part (b). Instead of discussing board-level initiatives that would be appropriate to placing health and safety management on a par with other areas of business risk, they reverted to an answer style more appropriate to developing a positive health and safety culture. This perhaps highlighted a lack of ability to think at a strategic level.

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| Section B – three from five questions to be attempted |
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Question 7 *A young female employee of company A has broken her back in a fall down some stairs whilst at work. At the time of the incident she had been hurrying to meet a friend for lunch.*

An investigation has revealed that the fall was caused when the injured employee slipped on a fluid that had leaked from a floor cleaning machine, which had been left at the top of the flight of stairs. The cleaning machine was owned and operated by company B, a contract cleaning company. Senior managers from company A had been aware for some time that cleaning machines were left at the top of the stairs but had made no effort to deal with this situation.

- (a) **Identify** the likely defendants to a claim for damages. (2)
- (b) **Outline** the two main types of damages that the injured employee may claim **AND give** examples of what may be claimed under **EACH** type. (4)
- (c) *The injured party intends to bring a claim based on the tort of breach of statutory duty.*
- Outline** what the injured party will need to prove in order for her claim to succeed. (7)
- (d) **Explain** the possible breaches of the Health and Safety at Work etc Act 1974 that are relevant to this situation. (7)
-

This question related to Elements 9 and 10 of the syllabus and assessed candidates' knowledge of learning outcomes 9.1: *Explain the key requirements of the Health and Safety at Work etc Act 1974 and the Management of Health and Safety at Work*

Regulations 1999 and 10.2: Explain the criteria required to establish a successful civil action for breach of statutory duty, the main defences available and the procedure for assessment of damages under civil law.

This was the most popular question in this section of the paper. However, answers were often limited, especially in parts (c) and (d).

Most candidates were able to identify likely defendants for a straightforward 2 marks in part (a), although several unaccountably outlined *defences* instead of identifying *defendants*.

Answers to part (b) were of a satisfactory standard with most candidates appreciating the significance of general and special damages. Some candidates confused the two types of damages, which limited their ability to gain marks.

In part (c) a number of candidates seemed unaware of the tort of breach of statutory duty, instead giving inappropriate answers covering the tort of negligence. Several candidates thought that the Health and Safety at Work Act could be used in civil proceedings.

Answers to part (d) showed a lack of familiarity with the Sections of the Health and Safety at Work Act. Where references were made to the correct Sections of the 1974 Act, there was often a lack of accompanying explanation, possibly showing a lack of ability to apply the Act's requirements to a realistic scenario. References to Regulations were not required and gained no marks.

Question 8

A large warehousing and distribution facility uses contractors for many of its maintenance activities. Contractors make up approximately 5% of the total workforce but an analysis of the accident statistics for the previous two years has shown that accidents to contractor personnel, or arising from work undertaken by contractors, account for 20% of the lost-time accidents on site.

- (a) **Outline** possible reasons for the disproportionate number of accidents involving contract work, assuming that the accident statistics are correctly recorded. (6)
- (b) **Describe** procedures for:
- (i) selection of contractors; (4)
- (ii) control of contractors. (10)
-

This question related to Element 6 of the syllabus and assessed candidates' knowledge of learning outcome 6.3: *Identify the various categories of third parties in a workplace – the relevant legislative requirements, responsibilities and controls.*

This was a popular question with many reasonable answers being provided.

Answers to part (a) were fairly good, although some candidates attempted to show that the accident statistics were incorrectly recorded despite the question clearly stating otherwise.

Answers to part (b) were reasonable with most candidates gaining very good marks for points relating to contractor selection. For part (b)(ii), it was expected that candidates would have been able to describe in some detail a good range of procedures for the control of contractors. This often proved not to be the case with several rather generic answers being given.

Question 9 *In relation to European Union (EU) law:*

- (a) **distinguish** between EU directives and EU regulations; (4)
 - (b) **outline** the 'Co-decision' (or 'Ordinary') procedure for making EU legal instruments concerning health and safety matters; (10)
 - (c) **outline** the key functions of the European Court of Justice. (6)
-

This question related to Element 8 of the syllabus and assessed candidates' knowledge of learning outcomes 8.1: *Explain the sources and types of law in force in the UK relevant to health and safety* and 8.3: *Outline the influence and role of the European Union on UK health and safety legislation*.

Answers for those who attempted this question revealed a general weakness in knowledge of this area of the syllabus.

Part (a) was the best answered part of the question with most candidates being able to distinguish between directives and regulations.

Answers to part (b) were generally limited, although a few candidates who had studied this topic in detail gained reasonable credit. The question did not ask for a fully detailed description of the procedure, so it should have been entirely possible for candidates to gain good marks. Several candidates resorted to describing the UK system for making legislation despite the question clearly asking for an outline of a particular EU procedure.

Key functions of the European Court of Justice were only well understood by a few candidates.

Question 10 *A 19-year-old employee in his first week with a new employer accidentally dropped an expensive piece of equipment into a deep excavation. Nobody else saw this incident and so, in order to avoid being blamed, he chose to climb down a ladder to retrieve the item before his supervisor returned from his lunch break. While using the ladder to climb back out of the excavation, the employee slipped, fell and broke his leg.*

The employee had received a full induction on his first day but had not yet been given training in ladder safety. When interviewed following his accident, he stated that he was afraid of being disciplined, which was his previous employer's normal reaction in similar situations.

- (a) **Outline** the principles of the Hale and Hale model. (6)
 - (b) Using the Hale and Hale model, **outline** the factors that could have led to the accident as described above. (14)
-

This question related to Element 7 of the syllabus and assessed candidates' knowledge of learning outcome 7.2: *Explain the nature of the perception of risk and its relationship to performance in the workplace*.

This was by far the least popular question on the paper and showed a marked lack of knowledge of this area of the syllabus.

In part (a) candidates were invariably able to say that Hale and Hale is about human perception, but were unable to give much more detail beyond that. Some confused this model with the one in HSG 48 so gained no marks.

Only a few candidates were able to draw the model in answer to part (b) and fewer still were able to apply the principles to the scenario that was given. Several candidates gave little more than a description of what had happened, the general level of response being rather generic. Those candidates who drew the model then used it to outline factors that may have led to the accident fared better than those who provided generic answers.

Question 11 (a) **Outline** the principles and methodology of Event Tree Analysis. **(8)**

(b) A low pressure storage vessel is connected via pipework to a manufacturing plant that could, in the event of malfunction, generate a pressure great enough to rupture the vessel. To prevent this, a pressure detector is installed in the low pressure storage vessel. If pressure starts to rise above an acceptable level the detector activates a valve control system. This in turn closes the inlet valve to the vessel isolating it from excessive pressure. It has been estimated that pressure great enough to rupture the low pressure storage vessel would be generated once every four years on average (ie 0.25 failures per year).

Figures for the probability of successful operation of the system components are given in the table below:

| Component | Probability of Successful Operation |
|----------------------|-------------------------------------|
| Pressure detector | 0.95 |
| Valve control system | 0.99 |
| Inlet valve | 0.8 |

Construct an event tree for the protective system described above AND use it to **calculate** the overall probability of rupture of the low pressure storage vessel caused by the failure of the protective system. **(12)**

This question related to Element 4 of the syllabus and assessed candidates' knowledge of learning outcome 4.4: *Explain the principles and techniques of failure tracing methodologies with the use of calculations.*

This was another popular question with many good answers being provided. Some candidates, however, apparently do not appreciate the difference between event trees and fault trees, while others attempted the question with no apparent prior knowledge of either.

Answers to part (a) were generally weak. However answers to part (b) were much better with many candidates gaining full marks.



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