

September 2012

Examiners' Report NEBOSH National Certificate in Environmental Management



nebosh



Examiners' Report

NEBOSH NATIONAL CERTIFICATE IN ENVIRONMENTAL MANAGEMENT

UNIT NEC1: MANAGEMENT AND CONTROL OF ENVIRONMENTAL HAZARDS

SEPTEMBER 2012



CONTENTS

Introduction	2
General comments	3
Comments on individual questions	4

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 examinations 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.

© NEBOSH 2012

Any enquiries about this report publication should be addressed to:

NEBOSH
Dominus Way
Meridian Business Park
Leicester
LE19 1QW

tel: 0116 263 4700
fax: 0116 282 4000
email: info@nebosh.org.uk

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 set. 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 asked.

Some candidates find it difficult to relate their learning to the questions and as a result offer responses reliant on recalled knowledge 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 answer the question set and instead provide information that may be relevant to the topic but is irrelevant to the question and cannot therefore be awarded marks.
- Many candidates fail to apply the command words (also known as action verbs, eg 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 NEC1

Management and control of environmental hazards

-
- Question 1**
- (a) **Outline** how records of environmental management decisions can be used in the environmental management process at a later date. (4)
- (b) **Identify** ways in which environmental data may be recorded and presented. (4)
- (c) **Outline** the information contained within environmental records that should be retained for audit purposes. (12)
-

Part (a) of this question sought to assess candidates' understanding of the purpose of recording environmental information and decisions made and, in particular, how this information could be used at a later date. The answers generally only contained one or two points from a varied potential list. Similarly, in part (b), candidates struggled to identify more than one or two ways to record and present the data.

In part (c), candidates gained marks with good selections of records that should be retained. It is worth noting here that training often comes up in answers, but to gain a mark (particularly in an outline question), it has to be in context. In this case, it would be training records with suitable examples.

- Question 2** *A pipe carrying oil from a storage tank to a boiler has developed a leak resulting in significant pollution to several kilometres of a large water course.*
- Outline** the potential legal **AND** financial consequences for the company responsible. (8)
-

This question was well answered by most candidates. The question sought to assess candidates' understanding of the risks attached to causing pollution and the likely consequences. The legal consequences are straightforward. The financial consequences could be severe, including legal costs, fines, clean up, compensation and indirect costs depending on the local circumstances. These should feature in most companies' assessments of the preventative measures they ought to put in place in order to reduce the potential risks.

- Question 3**
- (a) **Identify FOUR** means of generating energy other than from fossil fuels. (4)
- (b) **Outline** the benefits of adopting non-fossil fuel energy technologies. (4)
-

This question was well answered in both parts. Most candidates included the more common means of generation, such as solar or wind power but there are more to choose from, including CHP which could be of direct interest to many businesses. For part (b), there is avoidance of air pollution that results from emissions from burning fossil fuels but some of the other benefits such as other pollution risks associated with fossil fuels and the possible financial benefits should not be forgotten.

Question 4 *Outline the information that should be contained within an environmental emergency response plan.* (8)

Most candidates successfully gave an outline of the various details that the plan should include. Some candidates still tend to get confused between the content of an emergency plan and the reasons for preparing an emergency plan. Candidates should read the question well before answering to ensure that the answer is relevant to the question asked.

Question 5 *A new cement works is being planned for construction on a greenfield site.*

(a) *Outline the main aspects associated with the proposal.* (4)

(b) *Outline the main potential impacts associated with the proposal.* (4)

This question was not well answered. Some candidates confused aspects and impacts and a few answered part (a) as if it were about environmental impact assessment. For part (a), most candidates could identify dust and noise but struggled to outline other aspects. This affected answers to part (b), as most impacts should be derived from the aspects. Candidates should bear in mind, however, that impacts can be positive, such as new sources of employment.

Question 6 *A manufacturing company is introducing night shifts at one of its factories.*

(a) *Identify FOUR typical sources of noise that could disturb local residents at night.* (4)

(b) *Outline control methods that could be introduced to limit noise.* (4)

This question was generally answered very well. The sources of noise such as those from vehicles and people as well as plant and machinery are typical of many operations. The control methods follow on from the identification of the sources and could range from management controls of people and activities and the times of operation, to changes to, or modifications to, the plant and machinery involved.

Question 7 *Two standard units used to measure air quality are ppm and mgm^{-3} .*

(a) *Give the meaning of EACH unit.* (4)

(b) *Outline the circumstances in which each may be used AND give an example in EACH case.* (4)

The answers to this question were generally limited. For part (a), most candidates did not clarify the difference, namely that ppm is by volume and mg/l by mass. This was then reflected in part (b), where the circumstances and examples used should have made this clearer. Some candidates failed to give examples or answered in respect of liquids rather than air and also lost the opportunity to gain marks.

-
- Question 8** (a) **Outline** the business benefits of minimising waste. (5)
- (b) **Identify** the environmental options, in hierarchical order, that form the waste hierarchy. (3)
-

This question was well answered in both parts. In part (a), most candidates were able to outline the potential savings in raw materials and waste management costs that could accrue. Thereafter, better answers would outline the less intangible benefits such as PR and marketing opportunities. Part (b) was seeking answers that recognised the logical progression within the waste hierarchy and the need to get the progression in the right order to get full marks.

-
- Question 9** *BS EN ISO 14001:2004 requires that an organisation identifies its 'significant environmental aspects'.*
- Outline** factors that should be considered in determining whether an environmental aspect is significant. (8)
-

This question was not well answered by many candidates. There was no pattern to the incorrect responses, although some candidates did not appear to know what made particular aspects significant. This is important in prioritising them as otherwise effort can be expended in dealing with relatively trivial aspects at the expense of those that ought to be dealt with first. It is important to understand what the factors are that make an aspect significant such as the scale or severity of its impact.

-
- Question 10** (a) **Identify TWO** greenhouse gases. (2)
- (b) **Identify TWO** different sources of greenhouse gases. (2)
- (c) **Outline** how emissions of greenhouse gases may contribute to 'climate change'. (4)
-

Most candidates answered part (a) well, although a few mentioned gases more associated with acid rain. Part (b) was also well answered, however, answers to part (c) were mixed. The mechanism by which greenhouse gases contribute to climate change was not well outlined beyond the gases preventing long wave radiation being radiated back into space. Some candidates made the common error of confusing climate change with ozone depletion.

-
- Question 11** **Outline** the information required when submitting an application for a permit to discharge effluent to a controlled water. (8)
-

This question was generally well answered. Much of the information required is standard for many permits such as business identity and nature of the business or processes carried out. Information specific to discharges to controlled waters would include effluent flow rate, treatment applied to the effluent and the likely contents in terms of the standard measures such as BOD, temperature, etc. It would also contain anything particular to that discharge given the nature of the business such as metals. The application must also especially identify any List 1 substances that may be present.



nebosh

The National Examination
Board in Occupational
Safety and Health

Dominus Way
Meridian Business Park
Leicester LE19 1QW

telephone +44 (0)116 2634700
fax +44 (0)116 2824000
email info@nebosh.org.uk
www.nebosh.org.uk