
Examiners' Report

NEBOSH INTERNATIONAL DIPLOMA IN OCCUPATIONAL HEALTH AND SAFETY

UNIT IB: INTERNATIONAL CONTROL OF HAZARDOUS AGENTS IN THE WORKPLACE

JULY 2017



CONTENTS

Introduction	2
General comments	3
Comments on individual questions	4
Examination technique	11
Command words	14

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 50,000 candidates annually and are offered by over 600 course providers, with examinations taken in over 120 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 that applies best practice setting, assessment and marking and applies to Scottish Qualifications Authority (SQA) Accreditation regulatory requirements.

This report provides guidance for candidates and course providers for use 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 other 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, which is an essential requirement at Diploma level.

This report has been prepared to provide feedback on the standard date examination sitting in July 2017. This report covers both 2011 and 2015 specifications.

Feedback is presented in these key areas: responses to questions, examination technique and command words and is designed to assist candidates and course providers prepare for future assessments in this unit.

Candidates and course providers will also benefit from use of the 'Guide to the NEBOSH International Diploma in Occupational Health and Safety' which is available via the NEBOSH website. In particular, the guide sets out in detail the syllabus content for Unit IB and tutor reference documents for each Element.

Additional guidance on command words is provided in 'Guidance on command words used in learning outcomes and question papers' which is also available via the NEBOSH website.

Candidates and course providers should also make reference to the Unit IB 'Example question paper and Examiners' feedback on expected answers' which provides example questions and details Examiners' expectations and typical areas of underperformance.

Unit IB

International control of hazardous agents in the workplace

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- Question 1** **Outline** what should be considered when selecting workplace seating to minimise ergonomic risks to workers. **(10)**
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This question assessed candidates' knowledge and understanding of learning outcome 9.2: Explain the assessment and control of risks from repetitive activities, manual handling and poor posture.

Candidates did not focus on workplace seating as required by the question and many candidates expanded their answers to include ergonomic issues in relation to lighting, ventilation, workplace layout and general DSE workplace arrangements, for which no marks were available.

Candidates were able to outline seating issues relating to height adjustability, stability and consideration to different workers. Some answers were too vague to gain marks, detailing the issue such as adjustability but not linking it to an outline of why that issue should be considered in relation to minimising ergonomic risk.

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- Question 2** Workers in a chemical manufacturing plant need personal protective equipment (PPE) to protect their eyes and faces when handling open containers of highly corrosive liquids.
- (a) **Describe** what should be considered when selecting the PPE for this task. **(6)**
- (b) **Outline** arrangements that the chemical manufacturer should put in place when the selected PPE is in use. **(4)**
-

This question assessed candidates' knowledge and understanding of learning outcome 3.4: Explain the effectiveness of various types of personal protective equipment (PPE) and the factors to consider in selection of PPE. Equivalent to 3.2: Explain the various types of personal protective equipment (PPE) available for use with hazardous chemicals, their effectiveness, and the factors to consider in their selection, in the 2011 specification.

In part (a) candidate responses to describe those issues with regards to the need to protect the whole face was limited, although this was clear in the question. Many candidates made reference to requirements for other PPE such as hand protection, which would not have gained marks. Marks were awarded for considerations such as compatibility issues, requirement to meet standards and ensuring adequate resistance to the specific chemicals being used.

In part (b) a good range of considerations to be put in place following purchase of PPE were outlined. However, a number of candidates did not provide sufficient detail to be awarded a mark as required by an 'outline' command word. Most candidates outlined the key elements with references to storage, checking for defects supervision and training in the use of the PPE.

Question 3 (a) **Give** the meaning of the term '*vocational rehabilitation*'. (2)

A worker has been absent from work for eight months following a back injury. This was a work-related manual handling injury. This worker is due to return to work.

(b) Using the bio-psycho-social model, **outline** possible barriers to the worker's rehabilitation. (3)

(c) **Outline** ways in which the employer can assist workers to return to work. (5)

This question assessed candidates' knowledge and understanding of learning outcomes 1.2: Outline the principles and benefits of vocational rehabilitation including the role of outside support agencies; and 1.3: Outline the management of occupational health (including the practical and legal aspects) (equivalent to 11.2 and 11.3 in the 2011 specification).

For part (a) candidates were able to give the meaning of the term with regard returning to work, but did not expand on how this includes, for example, overcoming barriers. Some candidates believed it to be something that is done away from the workplace before the worker returns.

Part (b) was not well answered. Candidates had difficulty in demonstrating an understanding of the bio-psycho-social model in relation to a worker's rehabilitation and therefore were unable to provide examples of barriers in relation to the model and scenario given. Candidates were unable to explain the model in any detail and could not differentiate between bio/psycho and social barriers. Instead they gave a list of general health conditions but did not effectively link them to the different aspects of the model.

For part (c) candidates had difficulty outlining enough ways as to how an employer can assist workers return to work to gain maximum marks and focused mainly on return to work interviews and making changes to the work. Some candidates digressed into areas of support covered by external organisations rather than the employer. Answers were sometimes too brief for an 'outline' command word.

Question 4 (a) **Outline** what is meant by the term '*biological monitoring*'. (2)

(b) **Outline** circumstances in which biological monitoring may be appropriate. (4)

(c) **Outline** what difficulties an employer must overcome when introducing a programme of biological monitoring. (4)

This question assessed candidates' knowledge and understanding of learning outcomes 1.3: Outline the management of occupational health (including the practical and legal aspects) (equivalent to 11.3 in the 2011 specification); and 4.3: Outline the principles of biological monitoring.

Those candidates who thought this question was about monitoring to track exposure to biological agents in the workplace, or that biological monitoring infers a relationship to bio-hazards/biological organisms rather than hazardous substances, had difficulty.

Candidates provided good answers for part (a) referring to the measurement of hazardous substances or metabolites. However, very little reference was made to what would be analysed. Those candidates who had difficulty with the term did not gain marks.

Part (b) was not well answered. Many candidates had difficulty demonstrating knowledge of a number of circumstances and most only outlined significant reliance on PPE and legal requirements for reasons why biological monitoring may be appropriate. Some candidates went into depth of how the monitoring should be done and the type of equipment to use, which was not what the question was asking so no marks could be awarded.

In part (c) candidates provided a good range of difficulties an employer must overcome. However, few identified non-occupational exposure and the lack of availability of guidance values.

Question 5

An organisation operates a call centre to handle customer service enquiries. The call centre operates between 08:00 and 20:00, seven days a week.

Outline the potential causes of stress to call centre workers for **EACH** of the UK Health and Safety Executive's (HSE's) Management Standards below:

- | | | |
|-----|----------------|-----|
| (a) | demands; | (4) |
| (b) | support; | (2) |
| (c) | relationships. | (4) |
-

This question assessed candidates' knowledge and understanding of learning outcomes 8.1: Explain the effects and causes of common types of mental ill-health within the workplace; and 8.2: Explain the identification and control of workplace mental ill-health with reference to relevant standards (8.1: Explain the scope, effects and causes of work-related stress; and 8.2: Explain the identification and control of workplace stress with reference to relevant standards in the 2011 specification).

Overall this question was not well answered, with few candidates able to relate the *demand*, *support* and *relationship* issues to the scenario provided. Most candidates achieved marks for this question for *demand* and *relationship*. Some candidates did not read the question properly and therefore missed that the call centre handled customer service enquiries. There was a general lack of practical appreciation and understanding of the scenario and those who gained marks showed a good level of understanding of stress. Additionally, many candidates used lists to answer this question which did not meet the 'outline' command word.

For part (a) most candidates understood the type of workloads imposed on the workers with targets to achieve and unacceptable work patterns.

Part (b) was the least well understood of the standards. Candidate answers related mainly to a lack of training and referred to some causes more aligned to part (a) demands.

In part (c) most candidates outlined poor working relationships and aggressive customers, but there were very few references to feeling isolated. Many answers included domestic/family relationships, which was outside the scenario.

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- Question 6** A manufacturer's data on vibration emission from equipment can be used to estimate the exposure of workers to hand-arm vibration (HAV). This manufacturer's data is measured in a laboratory and can underestimate the actual vibration magnitude experienced by workers.
- (a) **Outline** possible reasons for this difference. (2)
 - (b) **Outline** how vibration emission from a hand-held tool might be measured. (3)
 - (c) **Outline** the content of a training course for workers exposed to HAV. (5)
-

This question assessed candidates' knowledge and understanding of learning outcomes 6.6: Explain the effects of vibration on the individual; 6.7: Explain the measurement and assessment of vibration exposure; and 6.8: Explain the principles and methods of controlling vibration and vibration exposure.

This question was not well answered by most candidates. Some answers were a little vague demonstrating a lack of detailed knowledge of this topic and resulting in answers more aligned to an 'identify' command word. It appeared that candidates did not read the question properly as, although the question scenario was based on hand-arm vibration, answers also included references to whole body vibration.

For part (a) most candidates outlined the maintenance issues that could affect the difference in magnitude measured rather than other reasons. Most candidates did not refer to vibration 'magnitude' just 'vibration', nor did they mention the effects of material being worked on being a potential reason for the differences in vibration magnitude.

Part (b) was not well answered. Although, candidates demonstrated they knew an accelerometer is used and that three axes are measured, many did not provide information in relation to siting, how long the tool is used for and combining measurement with trigger time.

For part (c) candidates gained marks for outlining the need to provide awareness on symptoms, reporting defects and maintaining tools. Many candidates mentioned the wearing of gloves but did not expand on why (keep hands warm to improve circulation, etc).

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- Question 7**
- (a) **Identify TWO** of the main types of biological agent. (2)
 - (b) **Outline** the **FOUR** special properties of biological agents. (4)
 - (c) Zoonoses are diseases transmitted from animals to humans. Two important zoonotic diseases are psittacosis and leptospirosis. For **EACH** of these:
 - (i) **identify** the animals associated with causing the disease in humans; (2)
 - (ii) **outline** the mode of transmission from animals to humans; (4)
 - (iii) **outline** methods of preventing infection of humans. (8)
-

This question assessed candidates' knowledge and understanding of learning outcomes 5.1: Explain the types and properties of biological agents found at work; and 5.2: Explain the assessment and control of risk from deliberate and non-deliberate exposure to biological agents at work.

Parts (a) and (b) was well answered with many candidates able to identify more than the two required biological agents and at least two or three of the four special properties.

Part (c) proved somewhat more challenging for candidates as many did not appreciate that for parts (ii) and (iii) they needed to relate answers to psittacosis and leptospirosis. Most candidates were able to relate the disease to the correct animal. Transmission was better answered for leptospirosis than psittacosis, although some candidates' answers were in relation to routes of entry rather than transmission. Part (iii) was not well answered with few candidates able to provide prevention methods for psittacosis and only minimal methods for leptospirosis.

Question 8

An organisation uses rubber substances in its tyre manufacturing process. Rubber process dust and rubber fumes are produced during the process and both are classified as carcinogenic.

The following legally enforceable long-term exposure limits (8-hour time weighted average (TWA)) apply:

Rubber process inhalable dust	6mg/m ³
Rubber fume	0.6mg/m ³

The organisation has measured average worker personal exposure over a typical shift, which is provided below:

Substance	Duration of working shift	TWA concentration over the whole working shift
Rubber process inhalable dust	12 hours	3mg/m ³
Rubber fume	12 hours	0.5mg/m ³

- (a) **Outline** what is meant by inhalable dust. (2)
- (b) **Outline** the equipment and method required for personal sampling of inhalable rubber dust. (7)
- (c) **Calculate** the 8-hour TWA exposure to the process operators from **BOTH** the rubber process dust and the rubber fume. (6)
- (d) **Comment** on the significance of your answers calculated in part (c) in terms of exposure and possible future action. (5)

This question assessed candidates' knowledge and understanding of learning outcomes 2.2: Explain the identification, classification and health effects of hazardous substances used in the workplace; 3.1: Explain the principles of prevention and control of exposure to hazardous substances (including carcinogens and mutagens); and 4.2: Outline the methods for sampling of airborne contaminants (equivalent to 1.3: Describe the main effects and routes of attack of chemicals on the human body; 2.2: Explain elimination of risk or control measures for chemicals which are hazardous to health; and 4.2: Outline the strategies, methods and equipment for the sampling and measurement of airborne harmful substances, in the 2011 specification).

Candidates who chose to answer this question achieved most marks from part (c) and this was well answered by the majority with all showing clear workings and using correct units. A few candidates wrongly combined the data for dust and fume into one formula. While they were able to explain the significance of the answers from part (c) to part (d) in terms of LTEL being under and over allowed limits, the majority of candidates did not expand on this to provide answers in relation to reducing levels as the substance is carcinogenic or carrying out more detailed monitoring.

Parts (a) and (b) were less well answered. In part (a) there was little reference to the fact that the dust could be deposited anywhere within the respiratory tract, just references to the lungs and/or alveoli. In part (b) candidates only provided limited outlines to the equipment used and method required. Most identified that the filter needs to be weighed prior to and after collection of dust. However, few candidates identified the need for a timer or a personal air sampling pump.

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- Question 9**
- (a) **Identify** possible health effects from exposure to *ionising* radiation. (5)
- (b) **Outline** control measures that could minimise workers' exposure to *ionising* radiation. (15)
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This question assessed candidates' knowledge and understanding of learning outcome 7.3: Outline the effects of exposure to ionising radiation, its measurement and control.

This was a popular question choice and most candidates gained high marks. There did not seem to be any particular issues, although those candidates who did less well generally gave a small range of answers rather than outlining a wide range of control measures.

In part (a) most candidates identified burns, cataracts and sterility. In part (b) some candidates did not provide enough context to demonstrate they understood why it would be an effective control measure against ionising radiation. For example, there were references to the use of PPE but there were no specific PPE examples given such as overalls or gloves. A few candidates confused the question with one about ultraviolet and infrared radiation so gained a few marks for control measures applicable to general protection against radiation. Candidates who outlined restriction of access, storage for contaminated items and seeking advice from a radiation protection officer/advisor or supervisor showed a good understanding of the potential range of control measures.

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- Question 10** 'Suitable and sufficient' lighting in a workplace is necessary to protect the health and safety of workers.
- (a) **Identify** adverse health effects that workers could experience as a result of unsuitable or insufficient lighting. (4)
- (b) **Explain** how the following features of lighting could affect the safety of worker's:
- (i) low lighting levels; (2)
 - (ii) stroboscopic effects; (2)
 - (iii) colour effects. (2)
- (c) Lighting surveys can assess levels of illuminance in a workplace.
- Outline** what could affect levels of illuminance that are measured in a workplace. (10)
-

This question assessed candidates' knowledge and understanding of learning outcome 10.2: Explain the need for adequate and appropriate lighting in the workplace, units of measurement of light and the assessment of lighting levels in the workplace.

Overall those candidates who chose to answer this question found it challenging. For part (a) headaches was the most common health effect identified. In part (b) candidates had difficulty in explaining how the lighting features affected the safety of the workers as many did not understand the principles of each feature; for example how colour effects can affect how colours are seen so some hazards may appear different. Some candidates chose to answer part (b) with examples which, as long as they clearly demonstrated the features and safety affects were understood, gained marks.

When answering part (c) candidates appeared to concentrate more on the competency of the person conducting the survey and the equipment used, rather than the physical issues that may affect the measurement such as the time of day the measurements are taken, the positioning of lights and the reflection of surfaces.

Question 11 An employer has identified that workers are exposed to high noise levels and has used the single number rating (SNR) method to select hearing protection, using the information below.

Sound pressure level	91dB(C)
SNR for selected hearing protection	29

- (a) Using the data in the above table, **calculate AND explain** how to determine a realistic estimate of the A-weighted sound pressure level entering the ear of the workers wearing this hearing protection. **(4)**
- (b) **Comment** on whether the attenuation that is provided by this hearing protection is appropriate. **(2)**
- (c) **Identify TWO** other methods that could be used to determine if the hearing protection selected provides appropriate attenuation **AND**, for **EACH** of these methods, **outline** the data required in order to be able to calculate the attenuation provided by this hearing protection. **(6)**
- (d) Other than noise attenuation, **outline** factors that the employer should consider when selecting hearing protection. **(8)**

This question assessed candidates' knowledge and understanding of learning outcome 6.4: Explain the principles and methods of controlling noise and noise exposure.

A small number of candidates answered this question.

Part (a) proved challenging for those who attempted it. The calculations were mostly correct but the correct units of dB(A) were not defined. Very few candidates explained how a realistic estimate is determined.

Part (b) was generally answered well, with candidates commenting that the hearing protection provided good protection.

For part (c) many candidates suggested that audiometry is a valid method to assess whether the hearing protection is effective. Some candidates correctly identified HML and octave band analysis but did not outline how attenuation is calculated using each method.

Part (d) generally gave good responses as this is a well-known topic that could be related to various scenarios. The majority of candidates were able to gain marks for outlining compatibility with other PPE, storage requirements and the ease of use. Some candidates provided lists rather than outlining, limiting the marks that could be awarded.

Examination technique

The following examination techniques are consistently identified as the main areas in need of improvement for candidates:

Candidates misread/misinterpreted the question

Careful and thorough preparation for the examination is vital for candidates. Accredited course providers should assist candidates in setting out and applying sound revision and examination practice and preparation techniques to ensure that they are well prepared for the examination. This includes ensuring that candidates carefully read the question to determine exactly what is being asked and answer accordingly.

Examiners noted that there was evidence of candidates not understanding the question that was asked and therefore providing an answer that was not relevant to the question.

The range of English language skills demonstrated in the examination by candidates varies enormously. Examiners often find themselves faced with scripts where candidates do not appear to have understood the question and struggle to write a coherent answer in English. Candidates for this examination should satisfy the required IELTS Level 7 language requirements. Course providers are reminded that it is incumbent on them to provide appropriate advice and guidance to candidates to help ensure that they stand a reasonable chance of success in the study of the NEBOSH Diploma.

There were numerous examples of quite long, detailed answers that suggest practical experience but do not focus on the question being asked. This may be a result of candidates either not reading the question properly, or because of possible language issues where candidates do not understand what the question is asking.

The examination is assessing candidates on their understanding of 'managing' health and safety and a number of candidates did not seem to grasp this resulting in long, detailed answers on such issues as 'what to look for in an audit' rather than how to prepare for and manage an audit.

Examiners ask questions based on the syllabus. Points, no matter how valid, but unrelated to the question being asked, will not attract any marks. Candidates should note that where there is emphasis in a question (eg by the use of italics) it is to guide candidates towards a particular point. Reading and re-reading the question encompasses taking due note of this emphasis.

Candidates' handwriting was illegible

The examination situation is a stressful time for candidates and while the examination is not a test of the English language or handwriting, scripts must be legible for Examiners to mark them fairly. As the examination progresses, candidates can become both mentally and physically tired. In an increasingly electronic age, professional people do not have the same need to write text in longhand. However, to pass this examination it is an essential and necessary part of the preparation to rehearse writing questions in full and in the time allocated.

When practicing examination technique, candidates should hand-write their answers and get feedback from their course providers on legibility (as well as how they performed).

Course providers need to identify those candidates whose handwriting is illegible and provide them with appropriate advice. Examiners cannot award marks for answers that they are unable to read.

Candidates unnecessarily wrote the question down

There are 15 minutes to answer a 10-mark question in Section A and 30 minutes available to answer a 20-mark question in Section B of the question paper. This time will be required for reading, re-reading and understanding the question, developing an answer plan on the answer booklet and finally committing the answer to the answer booklet. The efficient use of time is essential in order to answer the 9 questions within the 3 hours available. The majority of Examiners reported that candidates felt it necessary to write the question out in full, before providing the associated answer, and this limits the time available. Course providers should remind candidates that it is not necessary to include a question with their answer.

Good examination technique is followed where the candidate frames the answer in the context of the question, rather than rewriting the whole of the question. As with the other examination technique points above, good examination technique is developed through practice and good preparation.

Candidates repeated the same point but in different ways

In some cases candidates tended to make the same point more than once, eg training. Once a valid point has been made and the mark awarded Examiners will not be able to award the mark again. Unless otherwise stated, most questions require candidates to respond with a wide range of issues to gain high marks. Consequently candidates should take care when using terms that contain numerous points that should be made separately.

Accredited course providers should brief candidates on examination technique by way of understanding what points are mark worthy in an answer and those that are not.

Candidates did not respond effectively to the command word

A key indicator in an examination question will be the command word, which is always given in **bold** typeface. The command word will indicate the depth of answer that is expected by the candidate.

Generally, there has been an improvement in response to command words, but a number of candidates continue to produce answers that are little more than a list even when the command word requires a more detailed level of response, such as 'outline' or 'explain'. This is specifically addressed in the following section dealing with command words, most commonly failure to provide sufficient content to constitute an 'outline' was noted. Failure to respond to the relevant command word in context was also a frequent problem hence information inappropriate to the question was often given.

Course exercises should guide candidates to assessing the relevant points in any given scenario such that they are able to apply the relevant syllabus elements within the command word remit.

Candidates provided rote-learned responses that did not fit the question

Examiners report a high incidence of candidates writing down answers they have memorised from previous Examiners' Reports. These answers often relate to a similar, but different question, to which the memorised answer is not wholly applicable. For example, it may require a different aspect of the topic or relate to a different scenario.

Candidates are expected to apply their knowledge and understanding to the actual question given, not the question they think they see. This is why it is extremely important that candidates understand and are able to apply their knowledge, and not just memorise. Course providers should help candidates apply their knowledge to a range of different scenarios to aid understanding of the topic.

Candidates did not allocate enough time to the question

Some candidates were unable to give answers of sufficient depth to warrant good marks and sometimes spent more time on questions carrying fewer marks than was warranted by the command word.

Candidates need to take note of the fact that answers in Section A are worth 10 marks and those in Section B are worth 20 marks. The Examiners' expectation is that more detailed answers are required in Section B. Some candidates spend a disproportionate amount of time in writing long answers to Section A questions at the expense of time spent on the more in-depth answers demanded in Section B. Proper preparation and 'mock' examinations can help to correct this.

Accredited course providers should ensure that candidates are given adequate opportunity to develop examination skills to ensure that answers are provided to the depth and breadth required.

Structured Answers

It is important for candidates to structure their answers as this helps cover all the requirements of the question without losing focus. It is good examination technique to look for the principles or the concepts that underpin the topic and to use those as a basis for delivering a structured answer.

Candidates answered by posing a question

Candidates need to resist the temptation to present their answers as merely a series of questions. 'Outline' requires candidates *'To indicate the principal features or different parts of'* and this is not done through posing questions to the Examiners.

Command words

Please note that the examples used here are for the purpose of explanation only.

The following command words are listed in the order identified as being the most challenging for candidates:

Outline

Outline: To indicate the principal features or different parts of.

Most candidates are familiar with the requirements of 'outline'. However, a number of candidates expect that by listing or giving bullet points that will be sufficient. At this level of qualification candidates are expected to be able to construct sentences around their answers.

An 'outline' question requires candidates to give the main issue and then provide the key features in the context of the question. Where a question that requires candidates to '**outline** the issues to be addressed in the development of an audit system' the response should provide adequate context to the issues in order to gain the marks. An answer that merely includes issues such as 'scope, training, commitment, etc' will not gain good marks since while the issues are relevant there is no context to the issues in relation to the question asked.

Candidates should provide context to the point being made to demonstrate understanding of the subject.

As required by a Diploma level qualification candidates should be able to demonstrate a detailed understanding of the subject matter and therefore be able to summarise and contextualise technical points in the field of health and safety. Those candidates who did provide good outlines to questions demonstrated understanding of the topic without going into too much detail.

If asked to '**outline** the purpose of local exhaust ventilation' in a given scenario, an answer such as 'contaminant removal, exposure limits' would be insufficient as this represents a listed answer. However, removal of contaminant at source (as far as possible) and ensuring exposure limits are not exceeded would higher gain marks.

If asked to '**outline** how health risks from exposure to lead should be managed...' in a given scenario, an answer such as medical tests, PPE, RPE would be insufficient as this represents a listed answer. However, surveillance tests for lead in blood/urine, the use of PPE such as overalls, the use of RPE such as respirator with appropriate particulate/fume filters would gain marks.

Explain

Explain: To provide an understanding. To make an idea or relationship clear.

Many candidates are still not properly prepared for this command word. A list of points (no matter how relevant) will not satisfy Examiners when the command word is 'explain'. So for example, where candidates were asked to explain the circumstances where heat and smoke detectors would be inappropriate, Examiners were looking for candidates to explain that heat detectors would be inappropriate in environments where temperatures fluctuate suddenly during normal work activities. Just saying 'workshops', for example, is not enough to provide an answer to an 'explain' question.

Commonly, candidates do not provide adequate detail in relation to this command word, eg '**explain** limitations of relying on accident numbers only as a measure of health and safety performance'. An appropriate response would provide the reader with reasons why relying solely on accident numbers would not provide a comprehensive view of the organisational performance in health and safety, eg accident numbers do not indicate incidence of ill-health and accident data may go up following initiatives following underreporting, etc.

Candidates are generally unable to provide clear answers where this command word is used but that may be due to lack of knowledge rather than not understanding what is required, since an explanation requires the candidate to provide reasoning for their answer. For example, when a question specifies 'explain' the candidate is required to provide an understanding or make clear an idea or relationship. For example '**explain** how malaria is transmitted to humans'. If a candidate responded with *mosquito bites humans* this would be insufficient to merit full marks as this does not provide a deep enough understanding or relationship from the specified command word or the context in which the question is asked. However, a candidate would get full marks if they elaborated on this stating that the disease originates with the plasmodium parasite that is then transmitted to humans via a bite from a feeding female mosquito that carries it; the parasite then transferring to the human blood stream, travelling to the liver.

Describe

'Describe. To give a detailed written account of the distinctive features of a subject. The account should be factual without any attempt to explain.'

Candidates are required to provide a word picture in response to this command word and therefore the candidate needs to have a good understanding of the subject of the question in the examination in order to gain good marks. Typically, a limited response to this command word will be an inadequate amount of detail in the answer.

For example, when asked to describe the contents of a safety policy candidates should provide the Examiner with relevant information about the contents of the policy, eg 'the policy should contain details of the organisational commitment to health and safety'. This would be supported with specific targets and commitment resource to ensuring compliance as a minimum but developing the health and wellbeing of the employees, etc'. An answer that goes no further than listing the subjects of to be covered in the policy would not attract good marks in the examination.

In the examination, lists and single word answers will rarely satisfy the requirement of the Examiners in terms of answering the question at this level. It is noticeable that the well prepared candidate has less trouble deciphering command words and tends to gain good marks whereas those candidates who use single word answers will tend not to have the knowledge to write anything further in the context that is required.

Give

Give: Only a short answer is required, not an explanation or a description.

'Give' is normally used in conjunction with a further requirement, such as '**give** the meaning of' or '**give** an example in **EACH** case'.

In some circumstances candidates may spend too much time giving unrequired detail in response to this command word. It is often used in conjunction with the meaning of a phrase or statement and candidates can over-elaborate the required answer. Time management is important in the examination and candidates should ensure that they respond with appropriate brevity where the command word and available marks suggest that is all that is required.

When asked to '**give** the meaning of motivation', it would appropriate to say that 'motivation is the driving force that leads an individual to behave in a certain way'. It would not be appropriate to discuss in detail different motivational theories.

On the whole most candidates respond well to this command word, often by offering a definition. There is evidence where candidates go into too much detail that left those candidates writing large amounts of text for very few marks.

Identify

Identify: To give a reference to an item, which could be its name or title.

As with 'give' above it is not uncommon for candidates to over-elaborate their answers in response to this command word. It is adequate for a candidate to provide the key point to the Examiner without further developing the point with supporting theory or examples unless they are specifically asked for.

When providing a response to 'identify' the mental selection and naming of an answer that relates to the question should be sufficient. In most cases, one or two words would be sufficient to be awarded corresponding marks. Any further detail would not be required and impacts negatively on the time limit for completing the examination. For example, if the question was '**identify** possible effects on the body when someone is exposed to lead' suitable responses would include developmental effects in unborn babies, anaemia, nausea/vomiting in order to be awarded a mark.

For additional guidance, please see NEBOSH's '*Guidance on command words used in learning outcomes and question papers*' document, which is available on our website: www.nebosh.org.uk/students/default.asp?cref=1345&ct=2.