
Examiners' Report

NEBOSH INTERNATIONAL CERTIFICATE IN CONSTRUCTION HEALTH AND SAFETY



UNIT ICC1: MANAGING AND CONTROLLING HAZARDS IN INTERNATIONAL CONSTRUCTION ACTIVITIES

MARCH 2018

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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 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.

This report has been prepared to provide feedback on the standard date ICC1 examination sat in March 2018.

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 Certificate in Construction Health and Safety' which is available via the NEBOSH website. In particular, the guide sets out in detail the syllabus content for ICC1 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 ICC1 'Example question paper and Examiners' feedback on expected answers' which provides example questions and details Examiners' expectations and typical areas of underperformance.

Unit ICC1

Managing and controlling hazards in international construction activities

- Question 1** A construction site fire safety audit found that no fire safety training had been given to contract workers. No arrangements had been made for evacuating disabled people from the site in the event of an emergency.
- (a) **Outline** the content of a fire safety training session for the contract workers. (10)
- (b) **Identify** circumstances that would require *further* fire safety training to be given to contract workers. (4)
- (c) **Outline** measures that could be considered to help ensure that disabled people can be evacuated safely from the site. (6)

This question assessed candidates' knowledge and understanding of learning outcomes 7.1: Describe the principles of fire initiation, classification and spread and the additional fire risks caused by construction activities in an existing workplace; 7.4: Identify the appropriate fire alarm systems and fire-fighting equipment for construction activities; 7.5: Outline the requirements for an adequate and properly maintained means of escape in a construction workplace; and 7.6: Outline the factors which should be considered when implementing a successful evacuation of a construction workplace in the event of a fire.

Part (a) of the question was answered reasonably well with candidates able to offer a good range of issues to be included in a training session.

Part (b) presented more of a challenge for candidates as most suggested after a change in legislation or to the building, few candidates mentioned broader issues around the increase in fire risk such as process change or increase in worker numbers attending site.

In part (c) some candidates only considered mobility restrictions and, in the main, only wheelchair-bound workers. Most candidates mentioned evacuation aids but did not consider refuges or havens. If candidates had considered other disabilities such as vision, hearing and mental impairments then a wider range of issues could have been discussed.

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- Question 2** Construction materials such as stone, brick, tile and concrete contain silica, which produces hazardous silica dust.
- (a) **Identify** construction activities that may expose workers to silica dust. (5)
- (b) **Identify** health risks associated with exposure to silica dust. (3)

This question assessed candidates' knowledge and understanding of learning outcome 8.5: Outline the hazards, risks and controls associated with specific agents.

Part (a) offered candidates an opportunity to identify a range of dust-producing activities that contains silica. Most candidates were able to offer concrete mixing and stone masonry but few candidates considered destructive activities such as concrete cutting or drilling.

Part (b) related to health risks and some candidates suggested slips, trips and falls or musculoskeletal injuries missing the point that the question related to health. It is advised that course providers prepare candidates by highlighting the requirement to read and re-read the question to ensure that answers are focused on the topic.

Some candidates offered a wide range of health issues but did not relate it to exposure to silica dust. Some candidates were also vague in the answers they gave such as 'cancer' where the expectation was 'lung cancer'.

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| Question 3 | (a) Identify specific types of injury that may be caused by the incorrect manual handling of loads. (4) |
| | (b) Outline what, associated with the <i>load</i> , will affect the risk of injury. (4) |
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This question assessed candidates' knowledge and understanding of learning outcome 4.2: Explain the hazards and control measures which should be considered when assessing risks from manual handling activities.

Part (a) was particularly well answered with a large number of candidates gaining maximum marks.

Part (b) was also generally well answered. Some candidates specified issues not related to the *load*. The word was italicised on the examination paper to provide candidates with a signpost to the requirements.

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| Question 4 | Identify types of work that are considered as construction under Article 2 of the International Labour Organisation (ILO) Safety and Health in Construction Convention C167. (8) |
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This question assessed candidates' knowledge and understanding of learning outcome 1.1: Identify the scope, definition and particular issues relating to construction activities.

Most candidates performed well on this question with most able to identify a wide range of activities.

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| Question 5 | Identify types of hazard that may cause slips and trips in a workplace. (8) |
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This question assessed candidates' knowledge and understanding of learning outcome 2.6: Explain the hazards associated with the movement of people on construction sites and the control measures for pedestrians.

Candidates also performed well on this question with most candidates concentrating on floor and walkway condition. Few candidates mentioned unsuitable footwear being worn by workers.

Question 6 **Outline** control measures to help reduce the risk of injury from electricity when using portable electrical tools. **(8)**

This question assessed candidates' knowledge and understanding of learning outcome 6.2: Outline the control measures that should be taken when working with electrical systems or using electrical equipment.

Candidates were expected to demonstrate a basic understanding of control measures that are common to most construction workplaces where powered portable hand tools are used. Some candidates had difficulty finding more than three or four control measures whereas, other candidates gave a wide range of issues that were not always worthy of a mark. A number of candidates stated 'intrinsically safe' as a control measure but did not expand on the simple statement and did not put their answer into any context or justify their answer.

It was observed that a large number of candidates offered one-word answers instead of the depth of answer required. The use of single words for an 'outline' question will not gain full marks.

Question 7 **Outline** practical ways to help reduce the risk to workers when using an electrical-powered cement mixer on site. **(8)**

This question assessed candidates' knowledge and understanding of learning outcome 5.4: Explain the main control measures for reducing risk from common construction machinery hazards.

Overall, this question was not answered well with many candidates concentrating on issues more aligned to road-going bulk mixers. It appears that candidates may have misread the requirements of the question.

Better answers gave a wider diversity of considerations and correctly identified issues such as locating the mixer on firm and level ground. Few candidates mentioned electrical issues such as cable protection. Some candidates had difficulty providing this level of detail and provided single word answers.

Question 8 **Outline** what should be considered when assessing the risk of a road traffic incident while driving at work. **(8)**

This question assessed candidates' knowledge and understanding of learning outcome 3.2: Outline the factors associated with driving at work that increase the risk of an incident and the control measures to reduce work-related driving risks.

Most candidates answered this question satisfactorily. They were able to give a range of issues related to everyday highway use.

Only a few candidates related to the driver's capabilities and influence of drugs and alcohol. A few candidates answered the question using a goods vehicle, to their advantage, as their framework for their submission.

Most candidates did not mention journey length.

Again, it was observed that a number of candidates relied on one-word answers instead of the outline required.

Question 9 A single-storey farm building is to be demolished using an excavator.
Outline control measures that the method statement should contain for this activity. (8)

This question assessed candidates' knowledge and understanding of learning outcome 12.4: Outline the main control measures that a demolition/refurbishment method statement should include

Candidates performed well on this question, with most concentrating on general demolition issues. Few candidates mentioned arrangements for segregation of waste.

Question 10 **Outline** what should be considered if work is to be carried out safely from a ladder. (8)

This question assessed candidates' knowledge and understanding of learning outcome 10.2: Explain safe working practices for access equipment and roof work

Candidates performed well on this question with most being able to relate to the oldest and most common means of access on construction sites.

Question 11 (a) X-rays are a type of ionising radiation. **Identify TWO** other types of ionising radiation. (2)
(b) **Identify THREE** sources of ionising radiation in the construction industry **AND**, in **EACH** case, **outline** how construction workers can be exposed to the radiation. (6)

This question assessed candidates' knowledge and understanding of learning outcome 9.3: Outline the health effects associated with ionising and non-ionising radiation and the appropriate control measure.

Most candidates did well on part (a) of this question, with many gaining full marks, with a few at half marks. Some candidates chose to offer more than two types. However, some included infrared and ultra violet as ionising radiation. This may have been attributable to misreading the question.

In part (b) most candidates gained half-marks, although most were able to identify sources on a construction site but did not outline how exposure could occur. Course providers must ensure that candidates are given sufficient support to provide confidence when answering these questions.

Examination technique

The following issues are consistently identified as the main areas in need of improvement for candidates taking Certificate level qualifications:

Candidates misread/misinterpreted the question

Candidates misreading or misinterpreting the question is by far the most common cause of candidates not gaining the maximum marks available.

NEBOSH questions are systematically and carefully prepared and are subject to a number of checks and balances prior to being authorised for use in question papers. These checks include ensuring that questions set for the Certificate level qualifications relate directly to the learning outcomes contained within the associated syllabus guides. The learning outcomes require candidates to be sufficiently prepared to provide the relevant depth of answer across a broad range of subject areas. For example, a candidate could be asked about the causes of stress, or could be asked about the effects of stress. A question could require a response relating to the principles of fire initiation, or a question could require a response relating to the spread of fire. Therefore, a candidate should focus not only on the general topic area (eg stress, fire) but also the specific aspect of that subject to which the question relates.

Candidates must also pay attention to the command word. For example, a question could ask candidates to '**identify** the hazards associated with demolition work', or a question from the same element could ask candidates to '**outline** the control measures required during demolition work'. Candidates appear to focus solely on the object of the question (demolition) and do not pay sufficient attention to the subject (hazards or control measures in the examples given) or the command word ('identify' or 'outline' in the examples given). There is often some confusion between hazard and risk. If a question requires an outline of hazards for a given situation, candidates must be careful not to provide risks, or even in some circumstances precautions, as they will not be able to attract marks.

Examiners suggest that while many candidates do begin their answer satisfactorily and perhaps gain one or two marks, they then lose sight of the question and include irrelevant information. Although further points included in an answer can relate to the general subject area, these points are not focused on the specific learning outcome and marks cannot be awarded. However, some candidates appear to misread or misinterpret several questions. This situation is more likely due to candidates preparing for the examination with a number of memorised answers obtained through rote-learning, that again can provide answers that are loosely associated with the subject matter but do not provide answers specific to the question. Such an approach is clearly evident to an Examiner and demonstrates little understanding of the subject matter and marks are not awarded.

Candidates are advised to allow sufficient time to read and re-read the question in order to determine the key requirements prior to committing their answer to paper. Preparing a time plan before the examination will indicate how many minutes are available for each question and then part of this time allocation can be given to reading the question. Underlining or highlighting key words can assist in keeping focused on the salient points and simple mind maps or answer plans can also be useful. Maps and plans should be kept simple so as not to use up too much examination time.

Candidates did not respond effectively to the command word

A key indicator a 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 and relates to the amount of detail that should be included in each point of the answer.

The learning outcomes in each element of all syllabus guides include the relevant command word that dictates the level of detail that should be covered in a course of study and the depth of answer that a candidate would be expected to provide in an answer to an examination question.

Examiners report that candidates continue to incorrectly observe the command words and therefore compromise their ability to gain the marks available. The majority of cases where command words are not observed relate to insufficient detail being given by a candidate in their examination answer. A significant number of candidates, irrespective of the command word given in the question, provide all answers in the form of a brief list of one or two words. This would normally not be sufficient to gain marks where the command word given was 'outline', 'explain' or 'describe', all of which require answers of more than one or two words.

Some candidates do provide too much information, which would not be required where a command word limits the expected answer to 'give' or 'identify'. Candidates would not be penalised for providing excessive detail but this would not be an efficient use of the time allocated.

Course providers should ensure that learning materials complement the command words in the syllabus guide and the NEBOSH guidance on command words and that sufficient time is given to advising candidates on suitable examination technique during a course of study.

Candidates unnecessarily wrote the question down

Developing a time plan is a key element in preparing for an examination. Advice included on Certificate question papers suggests that 30 minutes should be allocated for the answer to the long 20-mark question, and 90 minutes should be allocated to the answers for the remaining ten, 8-mark short questions. Therefore there are around 9 minutes available to answer an 8-mark question. This time will be required for reading the question properly at least twice, developing an answer plan, and then committing the answer to paper while regularly referring back to the question in order to maintain focus. Therefore any inefficient use of this time should be avoided.

The efficient use of this time is essential in order to ensure that all questions can be answered within the 2 hours available. Many candidates feel it necessary to write out the question, in full, prior to providing their answer and although this practice will not lose marks it will lose valuable time. A significant number of candidates do not answer all of the questions in the time permitted and do not complete the question paper, some of whom obviously run out of time.

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

It is clear that there are a significant number of candidates who seem to recite answers in the examination that have been rote-learned in advance and do not answer the question.

While knowledge of material forms a part of the study for a Certificate-level qualification, a key aspect being assessed is a candidate's **understanding** of the subject and reciting a pre-prepared and memorised answer will not show a candidate's understanding. In fact, if a candidate gives a memorised answer to a question that may look similar, but actually is asking for a different aspect of a topic in the syllabus, it shows a lack of understanding of the subject and will inevitably result in low marks being awarded for that answer.

Candidates repeated the same points but in different ways / Candidates provided the same answer to different questions

There are instances where candidates repeat very similar points in their answers, sometimes a number of times. This is easily done in the stressful environment of the examination. However, once a point has been successfully made and a mark awarded for it, that mark cannot be awarded again for similar points made later in the answer.

Candidates are advised to practise examination technique in their preparations to avoid this kind of pitfall. Writing an answer plan where points can be ticked off when made, or structuring an answer so that each point made is clearly shown, for example by underlining key points, can be of great use. This technique aids candidates and makes it much clearer in the stress of the examination for candidates to see which points have been made and reduce the chances of the same point being made several times.

Candidates did not answer all of the questions

It has been noted that a number of candidates do not attempt all of the questions and of course where a candidate does not provide an answer to a question, no marks can be awarded. This seriously affects the potential marks available and the possibility of achieving a pass. Course providers must emphasise the importance of attempting all questions in order to maximise the opportunity to attract marks.

There can be several reasons for this issue: running out of the allocated time for the examination, not knowing the answer to the question, or forgetting to answer a question.

Questions can be answered in any order and answers can be written in any order in the answer book provided. Candidates are advised to clearly keep track of questions they have attempted, such as

marking them on the question paper that would minimise the risk of inadvertently missing a question to answer.

If the subject of the question is unfamiliar or the answer is not known, then it will be challenging to provide an answer. This can result from rote-learning and preparing for an examination with a number of memorised answers, or simply not being adequately prepared for the examination across the breadth of the syllabus. There is always the risk of a candidate 'going blank' in an examination situation, in which case candidates should be prepared with some techniques to help. Rather than trying to remember what was taught or what has been read, ask yourself 'what would I do, in this situation?'. Reference to personal application or experience is sometimes enough to stimulate an answer that otherwise may have been missed. Alternatively, candidates can go back to first principles and break a question down into elements such as 'people', 'equipment', 'materials' and the 'working environment'. Approaching a question in small sections can minimise the risk of being overwhelmed by it as a whole.

Running out of time can be avoided by having an examination time plan and working to it. The question paper advises that you should spend 30 minutes on the long answer (question 1) and 90 minutes on the remaining ten short answer questions. This will provide around 9 minutes per short answer, follow the clock and when the time per question has expired, move on. Answering a question partly is better than not answering at all.

Candidates did not allocate enough time to the question / Time management

In a number of cases question 1 is left until last or later in the question paper and does not appear to be answered completely. Other candidates appear to rush the last one or two questions by providing very brief or bullet point answers, even when these questions require an outline. This indicates a lack of time management. It is advised that course providers and candidates spend time developing the skill of writing answers to questions bearing in mind the number of marks and time available. A 20-mark question requires significantly more detail than an 8-mark question.

Candidates might benefit from writing abbreviations to save time and to recognise that there is no need to write out the question at the beginning of their answer. Standard abbreviations such as HSE, RIDDOR, COSHH, PPE and DSE are acceptable.

Candidates' handwriting was illegible

Sometimes Examiners have difficulty in reading the handwriting of some candidates. Although allowances are made for candidates under the pressure of an examination, course providers must remind candidates that their writing needs to be legible or valuable marks may not be picked up during marking.

There is a minimum literacy requirement for candidates on NEBOSH qualifications. As stated in the syllabus guides the standard of English required by candidates studying for Certificate level must be such that they can both understand and articulate the concepts contained in the syllabus.

NEBOSH recommends to accredited course providers that candidates taking this qualification should reach a minimum standard of English equivalent to an International English Language Testing System score of 6.0 or higher in IELTS tests in order to be accepted onto a Certificate level programme.

For further information please see the latest version of the IELTS Handbook or consult the IELTS website: <https://www.ielts.org/about-the-test/test-format>

Candidates wishing to assess their own language expertise may consult the IELTS website for information on taking the test: <https://www.ielts.org>

Course providers are reminded that they must ensure that these standards are satisfied or additional tuition provided to ensure accessible and inclusive lifelong learning.

Command words

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

Outline

The command word 'outline' is by far the most challenging for candidates. Referring to the NEBOSH guidance on command words available on the NEBOSH website, 'outline' means *"To indicate the principal features or different parts of"*.

Many candidates do not give sufficient detail in order to warrant an 'outline' answer. The NEBOSH guidance on command word states that *"an exhaustive description is not required. What is sought is a brief summary of the major aspects of whatever is stated in the question"*.

If the use of the command word in everyday language or conversation is considered it may help the candidate understand what is required. If asked to '**outline** the risks to an operator when manually closing a valve' an answer such as 'cuts, bruises, burns and strains' would be insufficient as this represents a listed answer. However, 'cuts from contact with sharp edges of the hand wheel, bruises from impact with adjacent plant items, burns from contact with adjacent uninsulated pipe work and strains from using excessive force' would be sufficient.

Explain

The command word 'explain' requires the candidate to provide an understanding of the subject of the question and will usually be used in conjunction with 'why' or 'how'. Such as '**explain** how an interlocked guard operates' or '**explain** why a forklift truck may overturn'.

Some candidates approach an 'explain' question the same as an 'outline' and provide a number of individual points rather than providing an explanation as to how something operates or why something occurs. While some candidates do answer such questions sufficiently and satisfactorily, other candidates have difficulty in explaining in a logical sequence and many repeat the same point.

Identify

'Identify' questions require the name or title of an item, such as, '**identify** the effects of electricity on the human body', or '**identify** the features of a vehicle route'. In most cases one or two words will be sufficient and further detail will not be required to gain the marks.

For example, if asked to '**identify** types of equipment found in an office' appropriate answers could be personal computer, printer, telephone, photocopier, etc. There would be no need to embellish those points with a description of the equipment or its function.

However, in contrast to 'outline' answers being too brief, many candidates feel obliged to expand 'identify' answers into too much detail, with the possible perception that more words equals more marks. This is not the case and course providers should use the NEBOSH guidance on command words within their examination preparation sessions in order to prepare candidates for the command words that may arise.

Describe

The command word 'describe' clearly requires a description of something. The NEBOSH guidance on command words says that 'describe' requires a detailed written account of the distinctive features of a topic such that another person would be able to visualise what was being described.

If asked to describe the clock in the examination room, a person would have little difficulty in doing so and would most probably refer to its shape, its size, the colour of the clock and the style of numerals. Answers to such a question would almost certainly not result in general unconnected information about clocks, the history of clocks, or an explanation of why the clock is present in the room. Candidates should consider the general use of the command word when providing examination answers.

Give

'Give' questions require a statement that is relevant to the subject asked for in the question but additional explanation is not required. Often, 'give' questions ask for the meaning of a particular term. While detailed explanation of the application of the term would not be required, a correct knowledge of the term itself is needed in order for the Examiner to award marks.

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.