# **Examiners' Report**

# UNIT GC2: CONTROLLING WORKPLACE HAZARDS



# **SEPTEMBER 2019**

For: NEBOSH National General Certificate in Occupational Health and Safety NEBOSH International General Certificate in Occupational Health and Safety

## **CONTENTS**

Introduction	2
General comments	3
Comments on individual questions	4
Examination technique	9
Command words	12

## 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 learners annually and are offered by over 600 Learning Partners, 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 learners and Learning Partners 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.

© NEBOSH 2019

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 learners 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 learners, 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 GC2 examination sat in September 2019.

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

Learners and Learning Partners will also benefit from use of the 'Guide to the NEBOSH National General Certificate in Occupational Health and Safety' and 'Guide to the NEBOSH International General Certificate in Occupational Health and Safety' which are available via the NEBOSH website. In particular, the guides set out in detail the syllabus content for GC2 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.

# **Unit GC2**

## Controlling workplace hazards

#### Question 1

Hazardous substances in the form of paints, solvents and cleaning chemicals are to be used by contractors for the internal redecoration of a public library.

 (a) Identify possible routes of entry into the body of the hazardous substances.

(4)

(b) **Outline** what should be considered when carrying out an assessment of the risks to health from the hazardous substances.

(8)

(c) Outline control measures required to help reduce the risk of exposure to hazardous substances to library workers and members of the public.

(8)

This question assessed learners' knowledge and understanding of learning outcomes 7.2: Explain the factors to be considered when undertaking an assessment of the health risks from substances commonly encountered in the workplace; and 7.4: Outline control measures that should be used to reduce the risk of ill-health from exposure to hazardous substances.

In order to determine the risk of exposure and in order to establish the relevant control measures, the identification of possible routes of entry is an essential element of an assessment of the exposure to a hazardous substance. In part (a) of this question the substances given in the question were all, potentially, in a liquid form and the solvents would have the ability to evaporate and form an airborne vapour. Such forms of substances could be inhaled, ingested, injected, contact the skin and possibly absorb through the skin. Some learners lacked the correct terminology for routes of entry and gave answers such as 'through mouth' or 'through nose', which would not have gained marks.

When carrying out an assessment of the risks to health from exposure to hazardous substances, as required in part (b) to this question, the objective is to determine the likelihood of being adversely affected by the substance and the severity of the health effect should this occur. Therefore suitable answers of what should be considered when assessing the risk from hazardous substances would include the form of the substance, hazardous properties of the substance, duration and frequency of exposure, together with the effectiveness of the control measures, all of which would have gained marks. Learners who limited their answer to the steps in a risk assessment process without further details would not have gained the marks available.

Part (c) of the question required learners to outline control measures required to help reduce the risk of exposure to hazardous substances to library workers and members of the public and was generally well answered, especially where the hierarchy of controls were clearly applied. This resulted in the majority of learners being able to provide a good range of control measures for the particular scenario given, including to carry out work when the library is closed, using less hazardous chemicals, increasing ventilation and reducing the quantity of substances used. Learners who gained less marks on this part of the question did not give sufficient breadth in their answer by giving an insufficient number of points, not giving sufficient depth to their answer, as required by the command word, such as giving PPE as an answer with no expansion as to what appropriate PPE could be used.

#### **Question 2** Office workers are to relocate into a new workplace.

Other than welfare facilities, **outline** what should be considered when reviewing the health and safety requirements for the office workers in the new workplace.

(8)

This question assessed learners' knowledge and understanding of learning outcome 1.1: Outline common health, welfare and work environment requirements in the workplace.

A broad range of health and safety requirements apply to workplaces, including temperature, ventilation, sufficient space to work, workstation arrangements and the safety of doors and windows. Reference to these with sufficient outlines would have gained the marks available. Some learners appeared to ignore the fact that welfare facilities were not required in the question and went on to include welfare facilities in their answers. While the inclusion of welfare facilities in answers would not have resulted in marks being lost, time would have been wasted and perhaps further relevant points would not have been included.

#### **Question 3**

**Identify** possible hazards associated with using a petrol-driven strimmer (brush cutter) to cut roadside verges.

(8)

This question assessed learners' knowledge and understanding of learning outcome 4.3: Describe the main mechanical and non-mechanical hazards of machinery.

This question was reasonably well answered by the majority of learners. Hazards such as moving parts, ejected objects, hot surfaces and vibration were referenced in many answers, gaining the marks available. Some learners were not successful in gaining good marks as they confused 'hazard' and 'risk', or gave the type of outcome from exposure to the hazards such as cut, burn, asthma, rather than the hazard itself, which would have limited the marks which could have been awarded.

Additionally, a number of learners provided outlines for their answer, which was not required by the command word included in the question, while this additional information would not have lost any marks, this would have used up valuable time that could have been better spent on other questions.

# **Question 4** Water bottles weighing 20kg are currently being stored in a basement and workers are required to carry them to a first floor office and place them on to a water dispenser.

**Outline** control measures to help reduce the risk of manual handling injuries associated with:

(a) the task; (4)

(b) the load; (2)

(c) the environment. (2)

This question assessed learners' knowledge and understanding of learning outcome 3.2: Explain the hazards and control measures which should be considered when assessing risks from manual handling activities.

This question was answered reasonably well as most learners were conscious that the question related to control measures. However, a number of learners did not relate their answer to control measures and outlined the risk factors instead.

In part (a) the majority of learners received at least half marks by providing an outline of the benefits of using a lift and a trolley.

In part (b) learners who made reference to ensuring the water bottles have hand-holds or having bottles delivered that were lighter in weight would have gained marks.

Adequate flooring would have gained marks in part (c), although few learners made reference to unobstructed route. Some learners appeared to have not fully read the question and included individual factors such as health conditions and capability, which would not have gained any marks.

#### **Question 5** An extension has been added to the existing building of a nursing home.

**Outline** factors that should be considered when reviewing the fire risk assessment for the nursing home.

This question assessed learners' knowledge and understanding of learning outcome 6.2: Outline the principles of fire risk assessment.

(8)

Following any modifications or change of use of a building the fire risk assessment and arrangements for fire safety should be reviewed, as the existing arrangements may now be inadequate. In this question an extension has been added to an existing building of a nursing home. This would result in larger premises and most probably would result in higher occupancy, both of which would have an impact on fire safety. A result of this extension could be an increased number of ignition sources and new fuels being introduced, which could impact fire prevention and fire precautions and could be compromised due to increased travel distances and lack of assembly points.

In the majority of cases, learners did not provide answers relating to the question that required considerations when reviewing a fire risk assessment. Many provided just the steps when carrying out a risk assessment, which would not gain any marks. Some learners did provide answers relating to fire safety, but did not relate these answers to the additional requirements that may need to be provided within the nursing home, following the extension to the building.

#### **Question 6**

(a) **Identify** what may indicate a need to carry out an assessment of exposure to hand-arm vibration (HAV).

(4)

(b) **Identify** ill-health effects associated with exposure to hand-arm vibration.

(4)

This question assessed learners' knowledge and understanding of learning outcome 8.2: Outline the health effects associated with exposure to vibration and appropriate control measures.

Most learners who gained marks in part (a) could identify the need to carry out an assessment to hand-arm vibration based on worker complaints and the results of health surveillance.

In part (b) the majority of learners were able to identify health effects such as vibration white finger and a reduction in dexterity. Those learners who did not gain many marks in this part were not able to recognise this is a condition of the hands and stated effects such as headaches, back pain, strokes and heart problems.

#### **Question 7**

**Identify** what may increase the risk of injury to workers who need to walk through a warehouse.

(8)

This question assessed learners' knowledge and understanding of learning outcome 1.4: Explain the hazards and control measures for the safe movement of people in the workplace.

The majority of learners gained half marks in this question relating to injury to workers when walking through a warehouse. Those who did so were able to correctly identify risks associated with floor condition, obstructions on the floor and poor segregation of walkways and vehicle routes. Those who were awarded more than half marks extended their consideration to environmental factors, such as the level of lighting.

#### **Question 8**

A worker has received a severe electric shock when using a poorly maintained, portable electrical tool.

 (a) Outline how the condition of the poorly maintained, portable electrical tool could have caused the electric shock.

(5)

(b) **Identify** ways in which the risk of a severe electric shock can be reduced when using a portable electrical tool.

(3)

This question assessed learners' knowledge and understanding of learning outcomes 5.1: Outline the principles, hazards and risks associated with the use of electricity in the workplace; and 5.2: Outline the control measures that should be taken when working with electrical systems or using electrical equipment in all workplace conditions.

Part (a) was not well answered by a number of learners who were unable to outline how poorly maintained portable electrical equipment could cause an electric shock and therefore did not consider deteriorated cables exposing bare wires or damage to casing exposing live internal parts.

The majority of learners were able to gain most of the marks available in part (b), where they were required to identify the ways the risk of electric shock can be reduced when using a portable electrical tool. Many answers correctly stated RCDs and battery tools.

#### Question 9 (a) Identify:

- (i) merits; (2)
- (ii) limitations (2)

of a hold-to-run control device, when operating machinery.

(b) **Identify** other devices that could be used to stop a machine in the event that a person comes too close to a dangerous part. (4)

This question assessed learners' knowledge and understanding of learning outcome 4.4: Explain the main control measures for reducing risk from machinery hazards.

In part (a), which required the learner to identify the merits and limitations of a hold-torun device when operating machinery, it appeared that many learners were not familiar with a hold-to-run device. For those learners who did recognise the term 'hold-to-run device', the majority of responses for the merits of such a device related to the machine only running when the button is activated and it will stop when released. The possibility of defeating a hold-to-run device, in terms of a limitation, was also frequently referenced.

Part (b), in terms of other devices that could be used to stop a machine, was better answered, with references to pressure mats, pressure sensors and emergency stops being included in a high number of answers.

# **Question 10** A mobile hoist is to be used in a hospital in order to lift patients from bed and transfer them into a bath that is located in an adjacent bathroom.

Outline control measures to help reduce risk during this activity.

This question assessed learners' knowledge and understanding of learning outcome 3.3: Explain the hazards and controls to reduce the risk in the use of lifting and moving equipment with specific reference to manually-operated load moving equipment.

(8)

The majority of learners were able to outline some of the control measures required and gain half marks or higher accordingly. The most common control measures given by learners included checking the safe working load of the hoist, training for staff and preuse check of the lifting equipment. Further marks were available to learners who could also outline issues relating to the condition of the patient, together with ensuring that the patient is stable in the hoist prior to the lift taking place.

#### Question 11 A vehicle traffic route needs to be established on a construction site.

Outline control measures that should be considered for a suitable traffic route. (8)

This question assessed learners' knowledge and understanding of learning outcome 2.1: Explain the hazards and control measures for the safe movement of vehicles in the workplace.

Learners generally answered this question well, indicating an understanding of the features of a suitable traffic route, in this case on a construction site. Reference to adequate lighting, segregation, signage and crossing points all would have gained marks, where suitable outlines were given. Some learners either did not read the question properly or chose to answer something more familiar to them and widened their answer to include control measures relating to the vehicle and to control measures relating to the driver and pedestrians. Such answers did not relate to the traffic route and marks could not be awarded accordingly.

#### **Examination technique**

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

#### Learners misread/misinterpreted the question

Learners misreading or misinterpreting the question is by far the most common cause of learners 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 learners to be sufficiently prepared to provide the relevant depth of answer across a broad range of subject areas. For example, a learner 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 learner 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.

Learners must also pay attention to the command word. For example, a question could ask learners to 'identify the hazards associated with demolition work', or a question from the same element could ask learners to 'outline the control measures required during demolition work'. Learners 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, learners 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 learners 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 learners appear to misread or misinterpret several questions. This situation is more likely due to learners 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.

Learners 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.

## Learners 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 learner 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 learner would be expected to provide in an answer to an examination question.

Examiners report that learners 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 learner in their examination answer. A significant number of learners, 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 learners do provide too much information, which would not be required where a command word limits the expected answer to 'give' or 'identify'. Learners would not be penalised for providing excessive detail but this would not be an efficient use of the time allocated.

Learning Partners 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 learners on suitable examination technique during a course of study.

#### Learners 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 learners 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 learners 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.

#### Learners provided rote-learned responses that did not fit the question

It is clear that there are a significant number of learners 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 learner's **understanding** of the subject and reciting a pre-prepared and memorised answer will not show a learner's understanding. In fact, if a learner 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.

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

There are instances where learners 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.

Learners 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 learners and makes it much clearer in the stress of the examination for learners to see which points have been made and reduce the chances of the same point being made several times.

#### Learners did not answer all of the questions

It has been noted that a number of learners do not attempt all of the questions and of course where a learner 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. Learning Partners 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. Learners 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 learner 'going blank' in an examination situation, in which case learners 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, learners 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.

#### Learners 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 learners 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 Learning Partners and learners 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.

Learners 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.

#### Learners' handwriting was illegible

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

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

NEBOSH recommends to Learning Partners that learners 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: <a href="https://www.ielts.org/about-the-test/test-format">https://www.ielts.org/about-the-test/test-format</a>

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

Learning Partners 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 learners. 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 learners 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 learner 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 learner 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 learners 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 learners do answer such questions sufficiently and satisfactorily, other learners 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 learners 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 Learning Partners should use the NEBOSH guidance on command words within their examination preparation sessions in order to prepare learners 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. Learners 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: <a href="https://www.nebosh.org.uk/i-am/a-learner/">https://www.nebosh.org.uk/i-am/a-learner/</a> - from this page the document can be found by clicking on the relevant Qualification link, then on the 'Resources' tab.