

nebosh

**Guidance on command words used
in learning outcomes and question
papers – Diploma qualifications**

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1. Introduction

The purpose of this document is to provide guidance on the use and definition of command words used in education and assessment. The guidance will help students and tutors gain a better understanding of the role of command words in teaching, learning and assessing. The outcome is that students understand and know what to do when asked, for example, to 'describe' as opposed to 'explain'.

The phrase 'command word' is used to refer to the words specifically associated with the learning outcomes and assessment objectives of a qualification. Since learning outcomes are concerned with what students can do at the end of a learning activity, command words are action (active) verbs. The command words used follow Bloom's taxonomy of educational objectives and as such are instructional terms that indicate the level of thinking and type of performance that is required of students.

This document concentrates on command words used for NEBOSH Diploma qualifications.

2. Learning outcomes

NEBOSH produces a guide, which includes the syllabus, for each qualification. The syllabus is broken down into individual units and each unit into elements. Each element has clear learning outcomes. Command words are used in the learning outcomes to indicate what is required of students in relation to each item of content.

Example learning outcome:

Unit NDip A: Managing health and safety

Learning outcome 1.2

Outline the societal factors which influence health and safety standards and priorities.

3. Questions

Only questions that assess the learning outcomes established in the syllabus can be set. Questions are written to discover not only how much of a subject a student knows but also the associated skills that they are expected to demonstrate. Marks are then based on how effectively these skills are demonstrated. Command words are the guides in the question as to what assessment skill is being targeted by that question. Diploma questions will predominantly assess knowledge, comprehension and application, but may also assess the higher order skills: of analysis, synthesis and evaluation.

Knowledge requires an ability to recall or remember facts without necessarily understanding them. Command words used in knowledge based questions include identify.

Comprehension requires an ability to understand and interpret learned information. Command words used in comprehension based questions include explain.

Application is the skill of being able to take knowledge and apply it in different contexts and circumstances in order to understand why and where problems and issues arise. The important thing to remember is that whatever the context, eg a transport company, a communications centre or an oil refinery, the principles being assessed are the same, but will have different implications given the different industry or issue being considered. Command words used to assess application include outline and explain.

The higher skills of analysis, synthesis and evaluation involve:

- knowledge being broken down into constituent packs based on underlying themes;
- bringing information together in a new way;
- creativity;
- expressing informed, supported judgements;
- the use of value.

Command words are used very carefully and each question has a certain order of words to try to enable candidates to understand what Examiners are looking for. In every question the skills required by the specific command words are also reflected in the marks allocated for the question. In general there are going to be more marks available for application and comprehension skill questions than for knowledge based questions.

Understanding the command words in a question is the key to success in answering it. The command word indicates the nature of answer and the skills being assessed.

4. NEBOSH Diploma qualification command words

The following definitions are included for a common understanding of the command words used in the compilation of Diploma question papers.

Command word	Definition
Analyse	To divide or break down the subject matter or topic into parts, reasons, aspects etc and then examine their nature and relationship.
Assess	To present judgements of the factors raised, their significance, importance and why they are important and/or significant.
Calculate	To ascertain or determine by mathematical processes.
Comment	To give opinions (with justification) on an issue or statement by considering the issues relevant to it.
Compare and contrast	To provide a point-by-point account of the similarities and differences between two sets of information or two areas.
Consider	To offer some detail about an issue or event and to deliberate about the value of that issue/event.

Define	To give the meaning of a word, phrase or concept, determine or fix the boundaries or extent of. A relatively short answer, usually one or two sentences, where there is a generally recognised or accepted expression.
Demonstrate	To prove or make clear by reasoning or evidence how some relationship or event has occurred.
Describe	To give a detailed written account of the distinctive features of a subject. The account should be factual, without any attempt to explain.
Determine	To come to a decision as the result of investigation or reasoning.
Discuss	To give a critical account of the points involved in the topic.
Distinguish	To present the differences between; to separate into kinds, classes, or categories.
Evaluate	To determine the value or character of something by careful appraisal.
Explain	To provide an understanding. To make an idea or relationship clear.
Give	To provide short, factual answers.
Identify	To give a reference to an item, which could be its name or title.
Justify	To prove or show to be valid, sound, or conforming to fact or reason.
Outline	To indicate the principal features or different parts of.
Recommend	To bring forward as being fit or worthy; to indicate as being one's choice for something.
Review	To make a survey of; examine, look over carefully and give a critical account.

Accredited course providers are strongly advised to make command word lists available to both tutors and students to ensure a common understanding. Consistent and regular use of command words during teaching and revision will help students develop confidence in taking examinations.

5. Responding to command words in questions

It is important to read the whole question and to understand what the question requires as the command word on its own will need to be reinforced by the remainder of the question.

Many candidates miss out on gaining marks because they do not read the question carefully enough and do not think about their answer thoroughly before writing it down.

Candidates need to think about each question.

- What is the command word?
- What do I need to say to gain marks?
- What is or is not relevant to the question?

In many cases a brief answer plan is an essential aid to ensuring that answers are well thought out and structured.

NEBOSH applies a 'positive marking' approach; that is, marks are awarded for correct material in candidates' answers, rather than being deducted for incorrect or missing material.

In order to give further direction as to the detail of information required by the command word in a question, examples are given below.

Analyse

Applying **analyse** to a syllabus subjects:

- Q1. The following table shows the numbers of lost-time accidents to employees for two hospitals situated in the same locality. Hospital A is a long-established general hospital employing 2,500 staff, whereas Hospital B, which opened in 2004, is a private hospital employing 300 staff.

Year	Hospital A	Hospital B
2006	75	4
2007	69	7
2008	82	6
2009	78	5

Assuming that the numbers of employees have remained constant over the period, **analyse** this data, suggesting possible reasons for any difference in safety performance between the two hospitals.

(20)

Sufficient answers would include:

Raw data cannot be used to make meaningful comparisons between the two hospitals. In order to do so, the data must be converted into 'Accident Incidence Rates' (AIR) using the following formula:

Accident incidence rate = (No. Accidents/No. Employees) x 1000

Thus, AIRs for Hospital A are calculated as follows:

$$\begin{aligned}2006 \text{ AIR} &= (75/2500) \times 1000 = 30 \\2007 \text{ AIR} &= (69/2500) \times 1000 = 27.6 \\2008 \text{ AIR} &= (82/2500) \times 1000 = 32.8 \\2009 \text{ AIR} &= (78/2500) \times 1000 = 31.2\end{aligned}$$

Similarly, the AIR figures for Hospital B are:

$$\begin{aligned}2006 \text{ AIR} &= (4/300) \times 1000 = 13.33 \\2007 \text{ AIR} &= (7/300) \times 1000 = 23.33 \\2008 \text{ AIR} &= (6/300) \times 1000 = 20 \\2009 \text{ AIR} &= (5/300) \times 1000 = 16.67\end{aligned}$$

From the above figures, it can be seen that incidence rates in Hospital A are often significantly higher than those for Hospital B. However, it should be borne in mind that the above figures might not be directly comparable. This may be because the hospitals might have different definitions of a 'Lost-time accident' or because reporting rates, or propensity to take time off following an accident, might vary between the hospitals for socio-economic or cultural reasons. In addition, the fact that the figures relate solely to employees means that the extent of contractor use is unknown, meaning that the precise nature of work carried out (and the risks involved in that work) is not fully known. Furthermore, no account appears to have been taken of overtime or the use of part-time employees, ie the figures relate to actual numbers of employees and not to a full-time equivalence. Lastly, no account is taken of injury severity in the data, which could be a key parameter in making a valid comparison.

Possible reasons for the apparent differences in safety performance can be categorised according either to the inherent risk levels or to the adequacy of risk management arrangements.

Insofar as inherent risk levels are concerned, the nature of the hospital activities, such as the presence or absence of an accident and emergency department with its attendant problems of unplanned admissions, potentially difficult or intoxicated patients and increased patient movement and handling may be a key factor. The age of the hospitals may also help to explain the difference – the newer hospital may well have better designed and more modern equipment as well as premises that has incorporated more modern standards of safety and environmental control into their design. The older hospital has a larger, more complex workforce to manage, which might make it less able to compete for well-trained and experienced staff in the local marketplace.

Risk assessment and safety management processes may differ between the hospitals, with the newer hospital being able to develop systems from scratch since it opened and not having to cope with historical or out-of-date practices and a larger, more complex workforce and range of risks.

Assess

Applying **assess** to syllabus subjects:

- Q2. The case of R v Swan Hunter included a ruling on the interpretation of s2 (2) (c) of the Health and Safety at Work etc Act 1974.

Assess the significance of this ruling with respect to the relationship between an organisation and its contractors.

(5)

Sufficient answers would include:

Section 2(2) (c) of the Health and Safety at Work Act requires employers to provide **necessary** information, instruction and training. At face value, section 2 applies only to the relationship between the employer and employee. However, there are situations where persons other than employees need to be given information and/or instruction.

The Swan Hunter prosecution arose from a fatal accident where employees of Swan Hunter were working alongside contractors who failed to follow one of Swan Hunter's safe systems of work. At trial, one issue was whether the duty in s (2) (2) (c) obliged employers to provide information and instruction to employees of contractors.

Although section 2 sets out responsibilities of employers to their employees, the key word in s2 (2) (c) is 'necessary'. Thus, to ensure the safety of one's own employees it is *necessary* to provide information and instruction to employees of a contractor then that is what must be done, even though this section says nothing directly about contractors.

This ruling sets out an important point of law and shows the interpretive function of the courts. When direct employees and employees of contractors are working side-by-side, it may be necessary for the host employer to provide training to employees of the contractor. This has clear implications for any situation where contractors are employed – ignoring this principle can lead to situations where employees are placed at risk and their employer is prosecuted as a result.

Calculate

Applying **calculate** to syllabus subjects:

NB: It is important to always show how you have worked out your answer.

- Q3. Use the data below to **calculate** the 8-hour TWA exposure to flour dust for a bakery operative. *Your answer should include detailed working to show your understanding of how the exposure is determined.*

(6)

Working Period (Total shift time = 8 hours)	Tasks undertaken by bakery operative	Exposure to flour dust (mg/m ³)
08.00 – 10.30	Weighing ingredients	60
10.45 – 12.45	Charging the mixers	20
12.45 – 13.45	Lunch	0 (assumed)
13.45 – 15.45	Cleaning equipment	40
15.45 – 16.15	Assisting maintenance staff	0 (assumed)

Assume that exposure is zero during break times.

Sufficient answers would include:

$$\begin{aligned}
 \text{8 Hour TWA Exposure} &= (C_1T_1 + C_2T_2 + C_3T_3 + C_4T_4) \div 8 \\
 &= (60 \times 2.5 + 20 \times 2 + 0 \times 1 + 40 \times 2 + 0 \times 0.5) \div 8 \\
 &= (150 + 40 + 80 + 0) \div 8 \\
 &= 270 \div 8 \\
 &= 33.75 \text{ mg/m}^3
 \end{aligned}$$

Comment

Applying **comment** to syllabus subjects:

- Q5. You are the safety advisor for a large factory. Your Managing Director (MD) has refused to take action to comply with health and safety law, saying that compliance would be far too costly.

Comment on the MD's view, providing clear reasons why he is likely to be incorrect.

(10)

Sufficient answers would include:

The MD's view is flawed for a number of reasons. First, and most importantly, health and safety laws are currently the law of the land and must therefore be complied with. A failure to do so can lead to enforcement action being taken against the company, or against the MD personally.

The company may receive improvement and/or prohibition notices, or it may face prosecution for more serious breaches. Any enforcement action taken would probably result in significant cost to the company and would be in addition to what it would have to spend anyway in order to meet the relevant legal requirements. For example, the “Fees for Intervention” system means that the enforcement authority (HSE) will charge an hourly rate for enforcement action taken; these charges do not apply where an inspector visits and does not see a need for enforcement action. There may also be costs associated with litigation, together with fines that may be imposed in the event that the organisation is found guilty of breaching health and safety law. If one adds to this the amount of time that the MD will need to devote to dealing with the inspector, meeting with lawyers, attending court etc, then one can say that the costs of non-compliance would certainly be significantly greater than the costs of assessing risks and implementing sensible controls.

The MD should also be reminded that, in cases where the company commits an offence and that offence is due to the consent, connivance or neglect of the MD, then he will be liable to be proceeded against as well. The MD’s refusal to comply with health and safety law would seem to fall within the “consent” or “connivance” categories.

Few of the UK’s health and safety provisions are “Absolute” (meaning that they must be carried out without regard to cost); most are qualified by the phrase “so far as is reasonably practicable”. This means that the company has an opportunity to assess its own risks and put in place control measures that are appropriate and proportionate to those risks. In so doing, the arrangements should be cost effective, both in terms of the amount of money saved through avoidance of accidents and in the efficiency improvements that are likely to result from effective management of risks. The probability is, therefore, that the costs of compliance will not be as high as the MD appears to believe.

Legal requirements aside, there are still moral and economic reasons for following the spirit of the law, which should by themselves be sufficient motivation for the MD to act.

Companies that fail to follow the requirements of health and safety law may be seen by insurance companies as high risk, so insurance premiums will increase. In addition, the failure to follow health and safety law will probably result in less safe workplaces, which will mean that accident and ill-health rates will tend to rise. Not only will this reinforce the insurance company’s view that the company is high-risk, but there will also be a range of additional costs associated with sickness absence, incident investigation and recruitment of new staff to replace those made ill or injured at work.

The overall climate within an organisation that fails to manage safety effectively will be one of poor morale, which leads to reductions in productivity. This will have a direct impact on the profitability of the business.

Compare and contrast

Applying **compare and contrast** to syllabus subjects:

NB: Two separate accounts are not adequate unless the second account contains reference back to the first.

- Q6. **Compare and contrast** the functions of Safety Representatives appointed under the Safety Representatives and Safety Committees Regulations 1977, with Representatives of Employee Safety, elected under the Health and Safety (Consultation with Employees) Regulations 1996.

(10)

Sufficient answers would include:

By way of comparison, both types of 'Rep' are given the function of making representations to their employer. However, the wording used in the two sets of regulations with respect to this function is slightly different. 'Safety Reps' (ie those appointed under the terms of the 1977 Regulations) have a function of making representations to their employer on investigations and general matters affecting the health and safety of employees. The wording of the 1996 Regulations, however, states that 'Representatives of Employee Safety' (RoES) have the function of making representations to the employer on potential hazards and dangerous occurrences, general matters affecting health and safety of employees, and specific matters on which the employer must consult. In essence, however, the representative functions of both types of 'Rep' are broadly comparable.

Both types of representative have the function of representing employees in dealings with health and safety inspectors. In this regard there is close alignment of function.

By way of contrast, Safety Reps have a wider range of functions than 'RoES'. Whereas safety reps can investigate potential hazards and dangerous occurrences, examine the causes of workplace accidents, investigate complaints from employees, conduct inspections and receive information from inspectors, RoES have no comparable function. By the same token, safety reps can attend safety committee meetings, whereas there is no equivalent function for 'RoES'.

Finally, the method of appointment differs. 'Safety Reps' are appointed by the Union of which they are members, preference being given to those who have at least two years' experience within the organisation or one similar to it. 'RoES' on the other hand are elected by those who they wish to represent.

Consider

Applying **consider** to syllabus subjects:

NB: If you are asked to 'consider the impact of...,' then you would need to consider what the impact was and then to say what effect it had or might have.

- Q7. A manufacturing company employing 1000 people across four sites has experienced financial difficulties over recent months. Faced with a need to cut costs, the Managing Director is proposing to make the health and safety advisor redundant and is against using an external consultant to provide competent health and safety advice.

Consider the potential impact of this proposal.

(12)

Sufficient answers would include:

The Managing Director seems to be taking a very narrow view based on salary savings alone; he does not appear to have considered the benefit of having a competent in-house health and safety advisor, nor does he seem to have thought about the losses that may be incurred through not having timely and relevant professional health and safety advice. He would also appear to be unaware of the legal requirement to have a competent source of health and safety advice.

A company of this size will have a wide range of health and safety issues on which it will need advice in order to prevent or mitigate loss; the nature and extent of these issues means that it is unlikely that anyone other than a trained practitioner will have sufficient knowledge to advise properly. The Health and Safety Adviser is a specialist who will be aware of the hazards associated with different tasks and working environments and will be uniquely equipped to advise on appropriate control strategies for mitigating risk. He or she will be dedicated to this task, so their departure will mean that the day-to-day management of safety will fall to managers to a much greater degree than previously. Given the MD's apparent reluctance to deal with health and safety issues, it is foreseeable that standards of health and safety management within the organisation may decline.

Without a health and safety adviser to guide it, the company's health and safety management system is likely to stall, which will lead to less effective control of hazards and risks, which in turn will result in increasing incident rates.

An increase in incident rates could lead to a lowering of morale, which may have a knock-on effect on productivity. The greater number of incidents will also lead to expenditure on such things as sick pay, downtime, management time spent dealing with enforcement authority inspectors and, possibly, civil and criminal litigation costs. Insurers are also likely to note the upturn in incident rates and may levy increased insurance premiums as a result. Overall, the economic implications for the company may, in time, outweigh the salary that was paid to the safety adviser.

Lastly, it should be remembered that the employer is under a legal obligation to provide a nominated competent source of health and safety advice. This duty may be found in the Management of Health and Safety at Work Regulations 1999. It is apparent that the MD has no plans to appoint a competent health and safety professional, in which case

the organisation will be in breach of Regulation 7 of the Management Regs. This could lead to enforcement action being taken.

In summary, the MD's decision to make the health and safety role redundant, though superficially attractive from a salary saving point of view, is liable to cost more in terms of losses in the long run.

Define

Applying **define** to syllabus subjects:

Q8. **Define** the term '*biological hazard*'. (2)

Sufficient answers would include:

A biological hazard, also known as a 'biohazard', is an organism or a by-product from an organism that is harmful or potentially harmful to other living things. Common types of biological hazards include bacteria, molds, spores, viruses and fungi.

Demonstrate

Applying **demonstrate** to syllabus subjects:

Q9. Your Managing Director has reported to the board of directors that, despite the serious problems the company has faced over recent years, the number of accidents each year has remained 'reassuringly stable'.

Using the data in the table below, **demonstrate** to the Managing Director that there is no room for complacency **AND** suggest some possible reasons for any trend that you find.

(20)

Year	Average number of employees	Average number of person hours worked	Number of reported accidents
1991	625	1,031,500	63
1992	574	994,750	61
1993	582	996,000	60
1994	505	950,500	61
1995	462	935,500	61

Sufficient answers would include:

The relatively small range shown by the raw accident numbers is superficially attractive but cannot be taken as an accurate representation of the overall trend. This is primarily due to the variance in employee numbers, which will have had an effect on the accident incidence rate (AIR), plus a variation on the number of hours worked, which will likewise have affected the accident frequency rate (AFR). In order to demonstrate that the

organisation's statistics do not, in fact, show a 'reassuringly stable' pattern, it will be necessary to calculate the AIR and AFR and present the resulting data in a form that clearly shows any resulting trend.

The table of data shows that the number of person hours worked has dropped by 96,000 hours per year, ie by almost 10% of the 1991 figure. However, in parallel with this, the number of employees has dropped significantly from 625 to 462, a fall of 26%. In essence, this means that fewer employees have to cope with the requirements of the business and are working longer hours on average.

A better demonstration may be made by reference to accident incidence and frequency rates. The information provided allows a calculation of frequency and incidence rates using the following formulae:

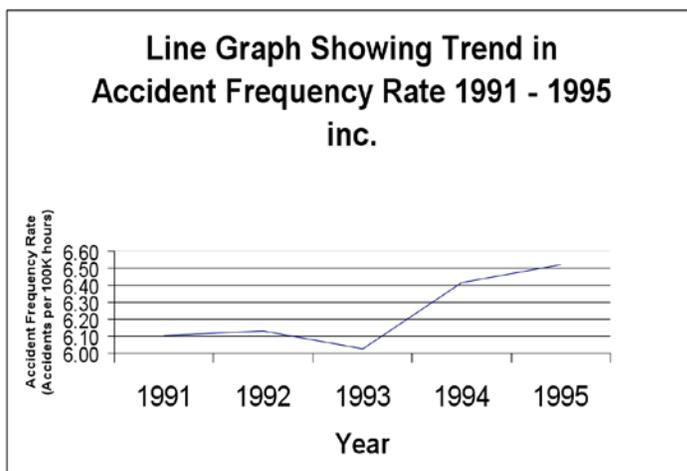
$$\text{AFR} = (\text{No. Accidents No.} \div \text{Hours worked}) \times 100,000$$

$$\text{AIR} = (\text{No. Accidents} \div \text{No. Employees}) \times 1000$$

Calculated incidence and frequency rates are as follows:

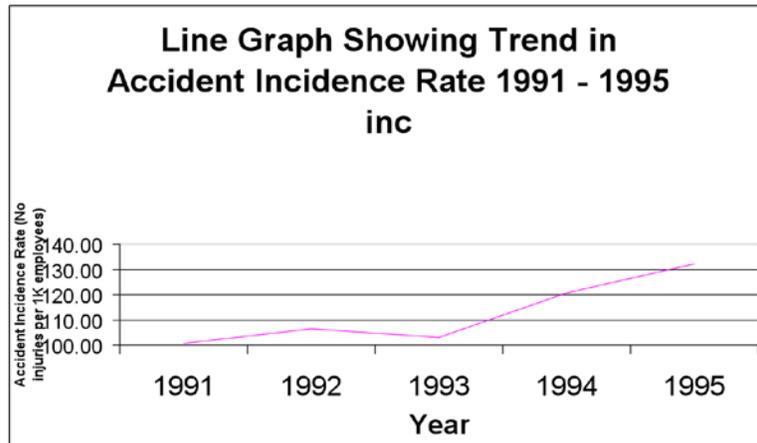
	Acc. Inc. Rate	Acc. Freq. Rate
1991	101	6.1
1992	106	6.1
1993	103	6.0
1994	121	6.4
1995	132	6.5

The above data reveals that the trend in accidents is steeper than the MD originally assumed from the raw data. This may be demonstrated even more effectively by drawing a graph of one or both of these parameters, such as that given below:



As can be clearly seen from the above line graph, there is no room for complacency as the accident frequency rate is clearly increasing from 1993 onwards. As this is a line graph, it is possible to extrapolate this forward to show that, in the absence of any controlling action, this trend would seem set to continue its upward rise.

The trend is verified by plotting the accident incidence rate as shown below:



There may be a number of reasons for these apparently increasing rates.

First of all, average hours worked per person in 1991 was 1650, whereas in 1994 it was 1882; by 1995, employees were working an average of 2025 hours per person per year. This increase of approximately 25% in hours worked per person could produce increased pressure of work, greater stress, the possibility of reduced supervision, conflicting goals (ie safety v production) physical tiredness and/or lack of concentration – any one of which may have been responsible for the increase in accident rates. It may also be the case that older and more experienced employees might have left the organisation, leaving younger and inexperienced employees to perform the same tasks.

Finally, the reference to the ‘difficulties’ that the organisation has faced may point to financial problems, resulting in a lack of investment in safety provisions, training etc.

In summary, the MD appears to have misled himself by focusing on raw data. When accident incidence and frequency rates are considered it becomes apparent those rates are rising and that, if action is not taken swiftly, serious damage to the business may occur.

Describe

Applying **describe** to syllabus subjects:

Q10. **Describe** the ways in which the body may defend itself against inhaled dusts. **(8)**

Sufficient answers would include:

The body’s first line of defense is the nasal hairs, which trap and filter out larger dust particles (ie those greater than ten microns in size). Mucus in the nose and mouth also traps these particles, which are subsequently ejected from the respiratory system by sneezing, blowing the nose and spitting.

Dust particles between five and ten microns in size pass beyond the nose and mouth into the respiratory tract where they will tend to settle in the mucus covering the bronchi and bronchioles. From here, the dust particles are wafted upwards by tiny hairs known as cilia, which together form a 'ciliary escalator' that transports the particles back toward the throat and mouth from where they can be expelled from the body.

Particles smaller than five microns, known as respirable particles, are more likely to reach the lung tissue. These particles are ingested by macrophages – a type of white blood cell – in a process known as phagocytosis and transported back to the ciliary escalator or to the lymphatic system. They may also be transported across the alveolar membrane into the blood stream.

Determine

Applying **determine** to syllabus subjects:

Q11. An office employee has fallen from height while attempting to access some files stored on a high shelf. At the time of the accident she was standing on a workstation chair that had a five star base fitted with castors.

Determine possible root causes of the accident.

(10)

Sufficient answers would include:

The employee is performing an unsafe act (standing on an office chair) and the fact that the chair has a movable seat and is on castors (and is therefore unstable) represents an unsafe condition. These so-called 'immediate' causes have their own contributory factors, which themselves are symptoms of root causes.

Standing on the chair may have been due to a poor attitude to safe working practice or to a lack of perception of risk on the employee's part. For instance, the employee may have had a perception that, since the task was a quick one, there was little or no risk involved. It may also have been the case that the employee considered that to go and get the right step ladder would have taken too long. This lack of perception may have been a result of a lack of training, which is a root cause. Poor attitude may point to a failure to recruit competent and safety conscious staff, which is a second possible root cause.

The use of the chair may point to a lack of availability of appropriate access equipment such as step ladders or stools. This may in turn be due to poor management control over work equipment procurement.

The position of the files may have been due to a lack of space or appropriate storage in the office, or it could have been due to a lack of appreciation of the risks involved in trying to access the files should they be needed. This lack of appreciation may have been due to a failure to properly risk assess the situation, which in turn may have been

due to a lack of trained assessors or a lack of management commitment to ensure a safe working environment – either of which could be classified as root causes.

In summary, root causes reflect a general lack of management control. These will include a failure to purchase suitable work equipment, a failure to recruit competent and safety conscious workers and a failure to train staff. There are also likely to be issues with failings in supervision.

Discuss

Applying **discuss** to syllabus subjects:

NB: You will be expected to put both sides of a case or an issue/argument in your answer and to make some evaluative comment about the factors you are discussing.

Q12. An employee was injured when she slipped and fell heavily on an oily floor while at work. She wishes to bring a negligence claim against her employer.

With reference to relevant case law **discuss** the three things that the employee will need to prove in order to win her case.

(20)

Sufficient answers would include:

In order to prove, on the balance of probabilities, that the employer was negligent, the employee will need to demonstrate that she was owed a duty of care, that the duty was breached and that the breach led directly to her loss.

Duty of care owed

There should be little difficulty in demonstrating that the claimant was owed a duty of care.

It will be open to the court to decide whether the claimant was owed a duty of care under the general principles as expressed in *Donoghue v Stevenson* or in *Caparo Industries v Dickman*, or whether she was owed a duty of care as an employee, the nature of which duty was set out by the Court of Appeal in *Wilson and Clyde Coal Company v English*.

As the claimant was an employee and was in the workplace when the injury was sustained, it seems likely that the principles in *Wilson* will apply. Thus, the case will turn on whether the duty was in fact breached or whether the breach led directly to the loss.

Breach of duty

The leading case on the nature of the duty of care owed by an employer to an employee is *Wilson and Clyde Coal Co. v English*. According to this case, the employer has a personal and non-delegable responsibility to provide competent and safety conscious co-workers, a safe place of work, safe plant and equipment and a safe system of work. A failure to do any one of these to a reasonable standard would be a breach of the duty of care.

The most relevant point from *Wilson* is clearly the duty to provide a reasonably safe place of work (although defective equipment that leaked oil onto the floor may also be a factor).

At face value, it would seem unreasonable to have oily, slippery floors in the workplace, but much will depend on the precise circumstances and facts of the case. If the claimant can convince the court that it was unreasonable for the floor to have been oily and that this led to her slipping and sustaining injury, then she will probably be successful. However, the employer may still have a defence.

In *Latimer v AEC*, there was a freak and unexpected downpour of rain that left behind an oily film on a factory floor. The company took prompt action in an effort to deal with the slippery floor surface but an employee, Mr Latimer, slipped, fell and was injured. Mr Latimer sued his employer but was unsuccessful since the court held that the company had done everything reasonable in the circumstances. Therefore, in this case the defendant employer will argue that they had in fact done everything that was expected of them and that was reasonable in the circumstances. If the court accepts this argument, then the claimant's case will fail.

If the employer can show that the claimant was aware of the oil but carried on regardless, then it may be able to convince the court that there was some contributory negligence. This will not absolve the defendant of liability entirely, since it is a partial defence. However, a successful plea of contributory negligence will reduce the damages that the employer's insurance company will have to pay out, so this will be in the employer's best interests. If the court finds that there was contributory negligence, then any damages award will be reduced by a percentage according to the court's assessment of the claimant's own responsibility for their injury (ie if the court considers that the claimant was 30% to blame, the damages award will be reduced by that amount).

Breach led directly to loss

The claimant will need to show that there was a clear and direct causal link between the breach and her injury. Witnesses, accident investigation reports, accident book entries etc will all be helpful in establishing that the claimant sustained the injury when she fell. It will therefore be open to the court to decide that the slip was due to oil on the floor, which caused injury.

Finally, the claimant will need to demonstrate that it was foreseeable that a slipping incident would occur with oil on the floor. She would only need to show that the employer should have foreseen that *some* type of injury was foreseeable in the event of a slip - it would not be necessary for her to show that the employer had to foresee the specific injury that she actually sustained before they were under a duty to act (*Bradford v Robinson Rentals*).

Distinguish

Applying **distinguish** to syllabus subjects:

Q13. In relation to European Union (EU) law:

- (a) **distinguish** between EU directives and EU Regulations; **(4)**

Sufficient answers would include:

EU Regulations are binding in their entirety on all Member States and require no further enactment to become effective. They therefore apply equally across all Member States.

Directives are binding as to the result to be achieved, but need implementing legislation to become law in any particular Member State. It is left up to the Member State to decide the precise format and content of implementing legislation, which can lead to differences in interpretation and a varying of standards across the EU, although the minimum standard as set out in the directive should always be complied with.

Evaluate

Applying **evaluate** to syllabus subjects:

NB: When asked to 'evaluate', you are generally being asked 'How worthwhile, satisfactory or effective in your opinion is this theory, explanation or policy?' A question will sometimes ask you to 'critically evaluate'. This means you should use your judgement and show that you understand that there may be no answer, more than one valid answer, or many perspectives on the problem in question. To come to a conclusion after weighing up the evidence.

Q14. One common way of describing accident causation is to use Bird's domino theory.

- Evaluate** this theory in terms of its ability to adequately explain the link between root causes and accident outcomes. **(5)**

Sufficient answers would include:

Bird's domino theory is a simple and effective way of showing a link between a failure in management systems and an accident; it is frequently used by accident investigators. However, it is a linear model, which proceeds from a lack of management control to 'basic causes' to 'immediate causes' then to the incident and onto the loss; it does not directly consider multiple causes and so a criticism might be that it does not directly model real-world accidents. Furthermore, the terms 'basic cause' and 'immediate cause' are sometimes misunderstood, which can lead to problems in tracing the link between root cause and outcome.

Other theories, such as the multiple cause theory, show that accidents usually have more than one cause; they develop the principles set out in the domino theory and create a more practical model that can be used to show greater complexity in accident causation. This will enable the investigator to evaluate accident causation more thoroughly and to put in place more effective remedial actions that help to reduce the potential for recurrence.

Explain

Applying **explain** to syllabus subjects:

NB: This command word is testing the candidate's ability to know or understand why or how something happens. Is often associated with the words 'how' or 'why'.

Q15. **Explain** how safety signs are used in the workplace.

(5)

Sufficient answers would include:

Safety signs are used in situations where there is a risk to health and/or safety that has not been avoided or controlled by other means; they provide valuable information to those present in the workplace but do not, of themselves, act as a physical control measure. In accordance with the approach set out in the hierarchy of control, other more effective measures such as engineering and procedural controls should be put in place before relying on safety signs.

Safety signs can be used to convey a number of types of message:

- mandatory signs instruct employees and others to take certain action, for example wearing hearing protection in a noisy area;
- prohibition signs instruct employees and others not to do something, such as not smoking;
- warning signs inform those present in the workplace that a hazard exists in that location and that they should therefore take care. Examples include warnings of the presence of forklift trucks, live electrical circuitry, lasers and so on;
- safe condition signs indicate the position of first aid equipment or the route to an emergency exit. The latter is particularly helpful for those who may be unfamiliar with the building.

As safety signs are a form of one-way communication, there is no way of checking that people have seen or understood them. This is why the use of safety signs is included toward the bottom of the hierarchy of control.

Give

Applying **give** to syllabus subjects:

NB: Give an example of; give the meaning of.

Q16. **Give** the meaning of the term 'hazard' **AND give** an example of a workplace hazard. (2)

Sufficient answers would include:

A hazard is something with the potential to cause harm, for example a slippery floor.

Identify

Applying **identify** to syllabus subjects:

NB: Normally a word or phrase will be sufficient, provided the reference is clear.

Q17. **Identify** methods of non-destructive testing (NDT). (4)

Sufficient answers would include:

- dye penetrant testing;
- ultrasound;
- radiography (gamma or x-ray);
- eddy current.

Justify

Applying **justify** to syllabus subjects:

NB: Show good reason for; present your evidence, with facts to support your position.

Q18. A safety manager in a manufacturing company has conducted a risk assessment on a large machine. The assessment has resulted in a recommendation to upgrade the guarding arrangements, which were found to be unsatisfactory.

Justify the decision to upgrade the guards rather than relying on procedural or behavioural controls. (10)

Sufficient answers would include:

The decision to improve the guarding arrangements may be justified in a number of ways.

First and foremost, PUWER, Reg 11 creates a legal duty to fence dangerous parts of machinery. This duty is qualified by the phrase ‘to the extent that it is practicable to do so’, meaning that measures must be implemented without regard to cost if technically feasible. Therefore, if it is possible to purchase and retrofit guards while still enabling the machine to be operated then this must be done in preference to reliance on procedural or behavioural controls.

Even when ongoing maintenance costs are taken into account, the cost of the new guarding arrangements is likely to be less than the very significant costs arising from a serious accident and consequent legal proceedings.

Procedural controls, such as safe systems of work, do not form a physical barrier between the operator and the dangerous part of the machine. Instead, a safe system of work is designed to provide a sequence of steps for the operator to follow and, if followed, to help ensure the operator’s safety. Unfortunately, safe systems of work often fall into disuse through complacency or familiarity. They may also be misread. Therefore, although they do offer some protection they are not as effective as a physical barrier.

Behavioural controls, such as relying on training or the observance of warning signs etc are an even less effective method of controlling the risk. The potential for slips, lapses or mistakes is high and can result in very serious injuries. Without a guard in place, operators may be tempted to violate safety rules in order to complete a task.

In summary, although the initial investment in guarding may be relatively high, the overall effectiveness of a guard in comparison with procedural or behavioural controls will be much greater and should be preferred.

Outline

Applying **outline** to syllabus subjects:

NB: An exhaustive description is not required. What is sought is a brief summary of the major aspects of whatever is stated in the question.

Q19. The senior management of an organisation need to introduce a number of new, safer working procedures but has met with resistance from the workforce.

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

(10)

Sufficient answers would include:

There are a number of steps that can be taken to gain the support and commitment of staff.

To start with, staff should be canvassed to identify any clear reasons for the resistance to change. This can be achieved by conducting staff surveys or by consulting directly with staff and/or their representatives. The management team should seek to actively involve staff through discussion and by gathering suggestions. The reasons for the proposed changes, as well as the expected benefits, should be clearly explained.

A trial or pilot programme could be run so that the proposed changes can be refined ahead of full implementation company-wide. When changes are implemented, the company should do so gradually and the necessary training should be made available to all who require it. Where appropriate, incentives could be offered to staff. Senior managers should demonstrate their commitment to the changes at every stage.

Once the changes have been implemented, the process should be reviewed so that lessons can be learnt for how to manage change even more effectively next time.

Recommend

Applying **recommend** to syllabus subjects:

Q21. You have been asked to consider the development of a new safety management system in a small, low risk office-based business having fewer than 20 employees.

Recommend an appropriate health and safety management system model, giving clear reasons for your choice.

(5)

Sufficient answers would include:

A small, low risk business with few employees will only need a relatively simple and straightforward safety management system, such as the “Plan-Do-Check-Act” (‘PDCA’) model.

This model is easy to implement and does not require external certification. Notwithstanding the relative ease of implementation, it should still enable the organisation to develop an effective management system that meets the legal requirement as set out in Regulation 5 of the Management of Health and Safety at Work Regulations 1999.

Another very popular system is that described in OHSAS 18001. However, this system is more suited to large organisations and requires the services of an accredited body to audit on a regular basis and for them to award and renew certification. Implementation of such a system, while possible, is likely to be unnecessary for the type of organisation in the current case; it will also be unnecessarily expensive and time-consuming.

The “PDCA” model will suffice for the organisation in its current form and will provide a sound foundation on which to build as the business grows.

Review

Applying **review** to syllabus subjects:

Q23. With reference to relevant case law, **review** the main defences available to claims of negligence brought by employees against their employers.

(15)

Sufficient answers would include:

No duty owed

Defences to claims of negligence start with denial that a duty of care was owed by the defendant to the claimant. In an employer/employee situation, this would be very difficult to argue, since the close and direct nature of the relationship between the two parties leads to a strong presumption that a duty is owed. However, in cases where the employee is injured outside of work when doing something that is not connected with work, yet for some reason tries to fix his or her employer with liability, the employer may be able to argue that no duty was owed.

No breach of duty

A key battleground for negligence claims is to argue that there was no breach of duty. The nature of the duty of care will first be examined and evidence will then be presented to show that the required standard was met. The usual test is one of reasonableness ie what the employer should reasonably have been expected to do in the circumstances. If the employer can show that they did everything that could reasonably have been expected of them in the circumstances of the case, then the defence that there was no breach of duty is likely to succeed. A case in point is Latimer v AEC, where the employer was able to show that the actions taken to deal with a slippery floor surface left by a freak and unexpected downpour of rain were adequate in the circumstances.

Breach did not lead to the loss

In many cases, it may also be possible to show that the breach did not lead directly to the loss that the claimant says they sustained. A good example of such a defence appears in the case of Corn v Weirs Glass (Hanley) Ltd where the claimant was claiming for injuries sustained when they fell down a flight of stairs whilst carrying a pane of glass. The claimant's case was that there had been a breach of duty in that the defendant failed to provide a hand rail on the staircase. At trial, the court decided that the absence of the hand rail was not causative of Mr Corn's injury - had it been in place he still would not have been able to use it as he had his hands full with the pane of glass. The defence therefore succeeded.

Type of injury was not foreseeable

Another defence might be to argue that the type of damage was not foreseeable. This defence is highly dependent on the specific facts of the case. For example, in Bradford v Robinson Rentals, a driver suffered frostbite after a prolonged journey in an unheated van in severe winter weather. His employer's defence included an assertion that frostbite was not foreseeable and that they should not therefore be liable for it. However, the court decided that it was not necessary to foresee the exact type of injury that might arise, merely that *some* injury was foreseeable in the circumstances. On that basis, the defence failed and Mr Bradford won his case.

'Volenti non fit injuria'

'Volenti non fit injuria' may be translated as "*to he who is willing no harm can be done*". This offers a complete defence in situations where the claimant took on a risk about which he or she was completely aware. For example, a professional rugby player consents to being tackled hard, so cannot bring a claim in negligence against another player or their club in the event that they are injured in a fair and otherwise reasonable tackle. However, the same rugby player will not consent to being placed at risk in a negligently conducted scrum, where there may be a serious risk of neck injury; should that occur, he will be free to bring his claim.

The defence of 'volenti' is rarely, if ever, successful in the work context since it would create an easy escape route for employers who could plausibly say that their employees had been briefed on the risks but had chosen to accept them regardless.

Contributory negligence

Contributory negligence is a partial defence that is used to reduce damages awards by allowing the court to find that the claimant was partly responsible for their injury. The court will decide on the percentage of contributory negligence, the damages being reduced by that amount. A good example of such a partial defence appears in the case of Uddin v Associated Portland Cement. In that case, the claimant became entangled in a revolving shaft while trying to catch a pigeon in an area of the factory where he was not supposed to be. The shaft was unguarded and so the defendant was held liable. However, the claimant was doing something that he was not authorised to do in an area where he was not supposed to be. The court took all this into account and found that the claimant was 80% contributory negligent.

Limitation period expired

Finally, claims may fail on the basis that they have been bought out of time. The Limitation Act 1980 states that claims for negligence should be brought within three years of the date of knowledge of the injury or the date of diagnosis of a disease. If the claimant was under the age of 18 at the time of injury or diagnosis, then time does not start to run for limitation purposes until the 18th birthday. If the claim is commenced after the expiration of the primary limitation period, the defendant may apply to have the claimant's case dismissed.

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