Unit 2 Equality, diversity and rights in health and social care

L01 Concepts of equality, diversity and rights, and how these are applied in the context of health, social care and child care environments

What is the meaning of equality, diversity and rights?

1 Write a definition of the terms ‘equality’ and ‘diversity’. [4 marks: 2+2]
   2 marks for each definition: 1 mark for a basic statement or 2 marks for a more detailed answer that demonstrates understanding.
   • Equality: Equality means ensuring that a person is treated fairly, given the same opportunities regardless of differences and treated according to his or her individual needs. Promoting equality means that individuals will not be discriminated against due to their differences, such as gender, race, age or disability.
   • Diversity: Diversity encompasses recognising and respecting individual differences. Examples of individual differences include faith, beliefs, race, customs and sexuality. Valuing diversity involves accepting and respecting differences by seeing everyone as a unique individual.

2 Identify five different aspects of diversity. [5 marks]
   Any five from:
   • Race
   • Religion
   • Cultural differences
   • Music
   • Food
   • Dress
   • Gender and gender reassignment
   • Marriage and civil partnership
   • Family structure
   • Age
   • Sexuality and sexual orientation
   • Language
   • Social class
   • The arts
   • Education

3 a Identify the six rights that individuals are entitled to. [6 marks]
   1 mark each, all six required.
   • Choice
   • Confidentiality
   • Consultation
   • Protection from abuse and harm
   • Equal and fair treatment
   • Right to life.

b Explain what each right means for individuals. [6 marks]
   1 mark each, all six required.
   • Choice: Gives individuals control over their lives and increases self-esteem because it promotes independence and empowerment.
   • Confidentiality: Means that private information should be shared only with those people who are directly involved in an individual’s care.
   • Consultation: Individuals using health, social care or child care services should be asked for their opinions and views about their care and treatment; this should inform the care they receive.
   • Protection from abuse and harm: Care settings and practitioners should have safeguarding procedures and safety measures in place and follow health and safety legislation.
   • Equal and fair treatment: Individuals working in or using health, social care or child care services should be treated within the law and according to their needs.
   • Right to life: An individual’s life is protected by human rights law. Everyone’s right to life should be valued and respected.

What are values of care?

1 Write a definition of the term ‘values of care’. [2 marks]
   1 mark for a basic statement or 2 marks for a more detailed definition that demonstrates understanding.
   The values of care are core principles that underpin the work of those providing health,
social care and child care services. They are a set of guidelines and ways of working for care settings and their staff. Applying the values of care ensures that individuals using health, social care and child care environments receive appropriate care and do not experience discriminatory attitudes, and that they have their diversity valued and their rights supported.

2 What is meant by the term 'need-to-know basis'?

1 mark for a basic statement or 2 marks for a more detailed definition that demonstrates understanding.

Information is shared only with those directly involved with the care and support of the individual. Access to information is restricted to those who have a clear reason to access it when providing care and support for an individual.

3 Give two examples of how a social worker could maintain confidentiality in his or her day-to-day work meeting with individuals who need care and support.

2 marks for each example: 1 mark for a basic statement or 2 marks for a more detailed example that demonstrates understanding.

• Private information shared by care workers only on a need-to-know basis. For example, information about a patient's illness and treatment would be shared only with the practitioners directly involved in working with that person, not told to all of the staff.
• Information such as client records kept securely in a locked filing cabinet or password-protected electronic records so that access is limited to authorised staff.
• No gossiping about clients with friends or family.
• Use of a private office or empty room for meetings so no one can overhear.

4 Explain how a residential care home could provide for the cultural and religious needs of the residents.

This is a Levels of Response Question (LOR). Marks are awarded for the quality of the explanation:

• Level 1: A basic explanation (1–2 marks)
• Level 2: A sound explanation (3–4 marks)
• Level 3: A detailed explanation (5–6 marks)

Explanations could include:

• Female staff available to meet cultural requirements, e.g. female doctor.
• Consulting with an expectant mother about where she would like to give birth and whom she wants to be present.
• Cultural and religious dietary needs met, e.g. menus with options such as halal, kosher. Providing a prayer room.
• Celebrating a range of different festivals, such as Eid, Chinese New Year, Christmas and Hanukkah.

The values of care in child care services

1 Identify the nine values of care that apply to child care services. [9 marks] 1 mark each:

• Making the welfare of the child paramount.
• Keeping children safe and maintaining a healthy environment.
• Working in partnership with parents, guardians and families.
• Encouraging children's learning and development.
• Valuing diversity.
• Ensuring equality of opportunity.
• Anti-discriminatory practice.
• Maintaining confidentiality.
• Working with other professionals.

2 Describe one example of how each of the values could be applied by a practitioner in a primary school setting. [18 marks: 9×2]

One example for each value, 2 marks for each example.

Examples could include:

• Making the welfare of the child paramount: Safeguarding policy and protection procedures in place, for example having a child protection officer.
• Keeping children safe and maintaining a healthy environment: Security measures in place to control access – having a staffed reception, staff lanyards and visitor badges, keypad entry system, CCTV at external entrances.
• Working in partnership with parents, guardians and families: Daily diaries for nursery children can be kept by staff to keep parents informed of what their child has done each day.
• Encouraging children's learning and development: To enable all to participate and learn, children's progress should be monitored so that support or extension activities can be provided.
• Valuing diversity: Displays, toys and resources in nurseries, playgroups and primary schools to reflect different cultures and beliefs.
• Ensuring equality of opportunity: Ensure all areas of the setting and all activities are accessible for all the children by making adaptions, for example wheelchair ramps, adjustable-height tables, easy-read books, information in a range of languages.
• Anti-discriminatory practice: Any discriminatory actions or comments, by children, staff or parents/carers, should be challenged.
• Maintaining confidentiality: Information such as a child’s progress records kept securely in a locked filing cabinet, or password-protected electronic records so that access is limited to authorised staff.
• Working with other professionals: In a child protection case a teacher, a social worker, a GP and the police may be involved in discussions about the best interests of the child.

3 Describe ways staff at a nursery could work in partnership with parents. [6 marks]

This is a Levels of Response Question (LOR). Marks are awarded for the quality of the description:
• Level 1: A basic description (1–2 marks)
• Level 2: A sound description (3–4 marks)
• Level 3: A detailed description (5–6 marks)

Answers could include descriptions of:
• Daily diaries for nursery children can be kept by staff to keep parents informed of what their child has done each day.
• Staff can have informal chats with parents when the child is dropped off or collected.
• Praise certificates can be sent home.
• Information sessions can be held.
• Newsletters can be sent home.
• Parents can be kept informed if their child has an accident or feels unwell.
• Parents can be invited in to discuss any issues or problems.
• Effective communication will help parents be involved with what is happening with their child at school or nursery.

Support networks

1 What is an advocate? [2 marks]

1 mark for a basic statement or 2 marks for a more detailed definition that demonstrates understanding.
Someone who speaks on behalf of an individual who is unable to speak up for themselves. They represent an individual’s wishes and views and act in the individual’s best interests.

2 a List three practical examples of things that an advocate can do. [3 marks]

Any three from:
• Go with an individual to meetings or attend for them.
• Help an individual find and access information.
• Write letters on an individual’s behalf.
• Speak for someone at a case conference to express their wishes.

b List three things that an advocate will not do. [3 marks]

Any three from:
• judge the individual
• give his or her own personal opinion
• make decisions for the individual
• speak for the individual.

3 Explain how a support group could help the parents of a child who has a physical disability. [8 marks]

This is a Levels of Response Question (LOR). Marks are awarded for the quality of the explanation:
• Level 1: A basic explanation (1–3 marks)
• Level 2: A sound explanation (4–6 marks)
• Level 3: A detailed explanation (7–8 marks)

Answers could include explanations such as:
• The group can enable them to meet with people in the same situation, who share common experiences.
• The group could provide information – e.g. about benefits, rights, support organisations, local help or facilities that are available.
• The group could give advice.
• The group could provide encouragement and comfort.
• The group could provide someone to talk to.
• The group could suggest coping strategies.

4 Describe how informal carers could help an 85-year-old person with mobility difficulties who lives alone. [6 marks]

This is a Levels of Response Question (LOR). Marks are awarded for the quality of the description:
• Level 1: A basic description (1–2 marks)
• Level 2: A sound description (3–4 marks)
• Level 3: A detailed description (5–6 marks)

Answers could include descriptions of:
• Personal care – showering, bathing, getting dressed
• Shopping
• Collecting prescriptions
• Preparing meals
• Doing laundry
• Keeping someone company, having a chat
• Mowing the lawn
• Dusting and cleaning.

LO2 The impact of discriminatory practices on individuals in health, social care and child care environments

Discriminatory practices

1 List five differences that can be the basis of discriminatory practices. [5 marks]
Now test yourself answers

1 mark each. Any five from:
• Age
• Culture
• Disability
• Gender
• Race
• Sexual orientation
• Social class

2 Describe three types of discriminatory practices. [6 marks]

1 mark for identifying a type of discriminatory practice and 1 mark for additional detail.

Any three from:
• Abuse: This refers to a negative and harmful way of behaving towards another individual or a certain group of people. Examples are physical, emotional, sexual, financial or verbal abuse, or bullying or socially excluding someone.
• Direct discrimination: This involves intentionally putting someone at a disadvantage or treating them unfairly based on their differences.
• Indirect discrimination: This is when a policy, practice or rule applies to everybody but has a detrimental effect on or disadvantages some people or a particular group.
• Prejudice: This is a negative attitude or dislike of an individual or group, often based on ill-informed personal opinion.
• Stereotyping: This is where generalisations, which are often offensive and exaggerated, are made about a particular group of people, such as older people, homeless people or those with disabilities.
• Labelling: This is a negative approach that identifies people as members of a particular group, with the assumption that they are ‘all the same’.
• Bullying: This involves threatening, intimidating, humiliating or frightening others; it is repeated behaviour intended to physically or psychologically hurt. Bullying is more likely to occur in situations where someone is in a position of power, such as a manager, or when an individual is dependent on a care worker or relative.

3 What is the meaning of the term ‘prejudice’? [2 marks]

1 mark for a basic statement or 2 marks for a more detailed definition that demonstrates understanding.

Prejudice is a negative attitude or dislike of an individual or group, often based on ill-informed personal opinion about that group – e.g. race, sexuality or gender.

4 State whether each of the following is an example of: direct discrimination, abuse or stereotyping. [4 marks]

1 mark for each correct answer.

a A primary teacher says that girls are always better behaved than boys. – stereotyping
b Calling someone offensive names. – abuse
c A day care centre for teenagers with physical disabilities provides craft activities for the girls and sports activities for the boys. – direct discrimination
d A hospital does not have information leaflets available in different languages. – direct discrimination

Individuals affected by discriminatory practice

1 Write a definition of ‘disempowerment’. [2 marks]

1 mark for a basic statement or 2 marks for a more detailed definition that demonstrates understanding.

A lack of control or independence. This is where an individual has, or feels they have, a lack of control over their life; they feel unwanted and unimportant and this can cause them to disengage with life.

2 Describe four possible different effects of physical abuse. [8 marks: 4×2]

2 marks for each effect: 1 mark for a basic statement or 2 marks for a more detailed example that demonstrates understanding.

Descriptions may include any four from:
• Disempowerment – where an individual feels they have a lack of control or feels unwanted or unimportant; can lead to acceptance of this feeling, resulting in loss of independence.
• Low self-esteem and low self-confidence – where an individual feels worthless and unimportant, leading to withdrawal and isolation.
• Poor health and wellbeing – physical injuries, such as bruising, cuts or broken bones, or neglect (e.g. medication, fluids and food not being given on time), which means health deteriorates.
• Unfair treatment – an individual not receiving the care or support they should be receiving, meaning they may feel marginalised or excluded from participating in things.
• Impact on mental health – anxiety, depression, self-harming, developing an eating disorder, behaviour changes such as aggression.

3 Explain how a young child who is being bullied at school could be affected. [8 marks]
This is a Levels of Response Question [LOR]. Marks are awarded for the quality of the explanation:
• Level 1: A basic explanation (1–3 marks)
• Level 2: A sound explanation (4–6 marks)
• Level 3: A detailed explanation (7–8 marks)
Explanations could include:
• Disempowerment – could feel unwanted, unimportant, lacking control of their situation.
• Low self-esteem/confidence – could feel worthless, lack confidence, become withdrawn.
• Poor health and wellbeing – could display physical injuries, loss of weight, illness.
• Mental health problems – may not want to go to school, experience fear and anxiety, develop an eating disorder.

LO3 How current legislation and national initiatives promote anti-discriminatory practice in health, social care and child care environments

Legislation: Care Act 2014 and Health and Social Care Act 2012

1 What are the six key aspects of the Care Act? [6 marks]
1 mark for each correctly identified key aspect:
• Duty on local authorities to promote an individual’s ‘wellbeing’
• Continuity of care
• Duty on local authorities to carry out Child’s Needs Assessments
• An independent advocate to be available
• Adult safeguarding
• Local authorities have to guarantee preventative services.

2 a ‘No decision about me without me’ is a key aspect of the Health and Social Care Act. How does this impact on an individual receiving care? [2 marks]
1 mark for a basic statement or 2 marks for a more detailed definition that demonstrates understanding.
• ‘No decision about me without me’ is intended to become the guiding principle behind the treatment of patients.
• Patients will be able to choose their GP, consultant, treatment, and hospital or other local health service.
• Empowers individuals as they will be consulted and involved in decision making for their care.

b ‘Healthwatch’ was introduced by the Health and Social Care Act. What is Healthwatch? [2 marks]
1 mark for a basic statement or 2 marks for a more detailed definition that demonstrates understanding.
• It is an independent service created by the Act.
• It aims to protect the interests of all those who use health and social care services.
• Healthwatch will have a role in communicating the views of patients to commissioning bodies and regulators.

c Outline three other key aspects of the Health and Social Care Act. [6 marks]
This is a Levels of Response Question (LOR). Marks are awarded for the quality of the description:
• Level 1: A basic description (1–2 marks)
• Level 2: A sound description (3–4 marks)
• Level 3: A detailed description (5–6 marks)
Descriptions should include information about the following:
• Public health
• Health and wellbeing boards
• Clinical Commissioning Groups.

Legislation: Equality Act 2010 and Mental Capacity Act 2005

1 Name the nine protected characteristics from the Equality Act. [9 marks]
1 mark for each protected characteristic, nine required. Wording must be exactly as shown below.
• Age
• Disability
• Gender reassignment
• Marriage and civil partnership
• Pregnancy and maternity
• Race
• Religion or belief
• Sex
• Sexual orientation.

2 Describe ways the Equality Act protects the rights of individuals with disabilities. [6 marks]
This is a Levels of Response Question (LOR). Marks are awarded for the quality of the description:
• Level 1: A basic description (1–2 marks)
• Level 2: A sound description (3–4 marks)
• Level 3: A detailed description (5–6 marks)
Descriptions could include:
• Direct and indirect discrimination on the basis of disability is illegal.
• Prohibits disability discrimination in education, employment, access to goods and services and housing.
• Covers victimisation/harassment on the basis of disability.
• Disabled access to services must be provided.
• Reasonable adjustments have to be made by employers or providers of goods or services, e.g. ramps, information in suitable formats, etc.
• Positive action encouraged, for example to apply for jobs where people with disabilities are under-represented.
• Discrimination due to association with an individual with a disability is an offence.

3 Identify two ways the Equality Act protects the rights of women.  
[2 marks]

1 mark each. Any two from:
• Prohibits direct and indirect discrimination on the basis of marriage, civil partnership, pregnancy and maternity, and sex.
• Sex discrimination in education, employment, access to goods and services and housing is illegal.
• Covers victimisation/harassment on the basis of sex, marriage, maternity, pregnancy.
• Women have the right to breastfeed in public places.
• Pay secrecy clauses have been made illegal.

4 ‘A presumption of capacity’ is one of the key aspects of the Mental Capacity Act. What is the meaning of ‘capacity’?  
[2 marks]

1 mark for a basic statement or 2 marks for a more detailed definition that demonstrates understanding.
• Capacity is the ability to make a decision.
• Some individuals with learning difficulties, dementia, mental health conditions, strokes or head injuries may have impaired, limited or lack of ability to make decisions.

5 Name the five statutory principles of the Mental Capacity Act.  
[5 marks]

1 mark for each statutory principle, five required. Alternative wording is acceptable.
• A presumption of capacity unless it is proved otherwise.
• Support to make own decisions.
• Right to make unwise decisions.
• Best interests – any action taken or decision made on behalf of a person who lacks capacity must be done in their best interests.
• Less restrictive option – anything done for or on behalf of a person who lacks capacity should be least restrictive of their basic rights and freedoms.
1 mark for each example.
Examples could be:
• Keep children's records in a locked filing cabinet (secured).
• Discuss the child's progress where no one can overhear (processed fairly and lawfully).
• Share information about the child only on a need-to-know basis (processed in line with the rights of the individual).
• Check details with parents, the child's teachers or the child (accurate and up to date).
• Destroy records when no longer needed (kept no longer than necessary).


1 Explain how the Children and Families Act supports the rights of children with special education needs and disabilities. [6 marks]

This is a Levels of Response Question (LOR). Marks are awarded for the quality of the explanation:
• Level 1: A basic explanation (1–2 marks)
• Level 2: A sound explanation (3–4 marks)
• Level 3: A detailed explanation (5–6 marks)

Explanations could include:
• SEND (children with special educational needs and disabilities).
• Introduced Education and Health Care (EHC) plans.
• Children's needs are assessed in a holistic way with EHC plans.
• Gives rights to a personal budget for children with an EHC plan.
• When writing an EHC plan, families have to be involved in discussions and decisions about children's care and education.
• Young people and parents must be informed by the local authority of support they are entitled to so they are aware of the choices that are available.
• Schools to be provided with more support for children with medical conditions in order to meet their needs. This extends the choice for children to attend mainstream school if they choose to.
• The Act aims to get education, health care and social care services working together.

2 The Human Rights Act states that everyone has the 'Right to freedom of thought, conscience and religion'. Give an example of what this right means for someone living in a residential care home. [2 marks]

1 mark for a basic statement or 2 marks for a more detailed example that demonstrates understanding.

National initiatives

1 For Care Certificate standards 13, 14 and 15, give an example of what a care assistant in a residential home could do to demonstrate their knowledge and skills. [3 marks]

1 mark for each example. A wide range of practical examples are acceptable as long as they are relevant to the role of a care assistant and the required standard.
• Health and safety: Carry out a risk assessment; check hoists are working properly.
• Handling information: Only share residents' private information on a need-to-know basis; password-protect electronic resident records.
• Infection prevention and control: Wash hands before and after assisting a resident with feeding; wear disposable gloves and aprons when giving personal care.

2 For Care Certificate standard 7, give two examples of what a care assistant in a residential home would do to meet the standard. [2 marks]

1 mark for each example, two required. A wide range of practical examples are acceptable as long as they are relevant to the role of a care assistant and to privacy and dignity.
Examples could include:
• Treating personal information confidentially.
• Asking individuals before touching them in any way.
• Knocking or speaking before entering the particular space or room they are in.
• Making sure curtains, screens or doors are properly closed before supporting a person to wash or dress.
• Arranging clothing or hospital gowns in a dignified way.
• Not making an individual wait to use the toilet or leaving them too long before you return.

3 Explain how the Care Certificate promotes good practice. [8 marks]

This is a Levels of Response Question (LOR). Marks are awarded for the quality of the explanation:
• Level 1: A basic explanation (1–3 marks)
• Level 2: A sound explanation (4–6 marks)
• Level 3: A detailed explanation (7–8 marks)
Explanations could include:
- Sets out the minimum standards for good practice in key aspects of care.
- Aim is for all care workers to have the same skills and knowledge.
- Required to be part of the induction programme for anyone new to care.
- Enables care workers to provide safe and high quality care and support.
- Sets out 15 standards.
- Care workers are assessed against the standards.
- Is for ‘unregulated’ job roles that previously did not require certification.
- Required to be part of the induction programme for anyone new to care.
- Enables care workers to provide safe and high quality care and support.
- Sets out 15 standards.
- Care workers are assessed against the standards.
- Is for ‘unregulated’ job roles that previously did not require certification.

4 State four benefits for a care worker of having completed the Care Certificate. [4 marks]
1 mark for each benefit, four required.
Benefits could include:
- Develops thorough knowledge of how to provide quality care, full training.
- Develops the skills to provide quality care.
- Develops the knowledge of how to provide a safe standard of care.
- Develops the knowledge of how to provide compassionate care and respect.
- Provides clear guidelines to follow.
- Develops understanding of appropriate legislation.
- Gives confidence to do the job to the required standard.
- Provides a basis for future career-development and job opportunities.
- Gives a sense of achievement.

Quality assurance
1 Explain the role of NICE. [6 marks]
This is a Levels of Response Question (LOR). Marks are awarded for the quality of the explanation:
- Level 1: A basic explanation (1–2 marks)
- Level 2: A sound explanation (3–4 marks)
- Level 3: A detailed explanation (5–6 marks)
Explanations could include:
- NICE assesses new drugs and treatments as they become available.
- It provides evidence-based guidelines on how particular conditions should be treated.
- It provides guidelines on how public health and social care services can best support people.
- It provides information services for those managing and providing health and social care.
- It aims to improve outcomes for people using the NHS and other public health and social care services.
- It considers whether a drug or treatment:
  - benefits patients
  - will help the NHS meet its targets, for example by improving cancer-survival rates
  - is good value for money and cost-effective
  - should be available on the NHS.
- Provides clear guidelines to follow.
- Develops understanding of appropriate legislation.
- Gives confidence to do the job to the required standard.
- Provides a basis for future career-development and job opportunities.
- Gives a sense of achievement.

State three actions that the CQC can take if a care setting is found to be providing inadequate care. [3 marks]
1 mark each. Any two from:
- It can issue warning notices.
- It can require improvements to be made.
- It can carry out a re-inspection.
- It can impose fines.
- It can withdraw the setting’s registration and licence.
- It can close the setting down.

3 How do national initiatives, such as Ofsted, help improve standards? [3 marks]
1 mark each. Any three from:
- They ensure a person-centred approach to care.
- They meet individual needs.
- They empower individuals.
- They provide accessible services.
- They provide a system of redress.
- They provide guidelines for practitioners.
- They raise standards of care.

4 Describe three ways the EHRC could support an individual who has been a victim of discrimination in a care setting. [3 marks]
1 mark each. Any three from:
- It has a website that provides information and advice.
- It provides definitions of different types of discrimination, so the individual could check that they really have been discriminated against.
- It provides advice on whether what happened was against equality law.
- It suggests ways to sort out the situation with the person or organisation.
- It produces factsheets about discrimination.
- It advises on how to make a discrimination complaint.
- It provides information about how to take a case to court.
- It provides contact details for a telephone equality-advisory and support-service helpline.
The impact of legislation and national initiatives

1 Figures 2.10 and 2.11 show impacts of legislation and national initiatives for service users – meeting individual needs and making services accessible. Give three other examples of impacts. [3 marks]

1 mark for each impact, three required.

Answers as in the list below or other specific examples:
• Raises standards of care
• Provides guidelines for practitioners
• Person-centred approach to care
• Provides a system of redress
• Empowerment.

2 Give three ways to ensure an interview does not discriminate against any of the applicants. [3 marks]

1 mark for each way.

Example ways:
• Check the interview does not discriminate against any of the nine protected characteristics.
• Questions asked at an interview must be non-discriminatory.
• Interviewers should be trained in equality and diversity so that they are aware of bias and discriminatory practice.
• A mixed interview panel (age, experience, men and women, different ethnicities) can help avoid bias.

3 Explain how organisational policies help promote good practice. [8 marks]

This is a Levels of Response Question (LOR). Marks are awarded for the quality of the explanation:
• Level 1: A basic explanation (1–3 marks)
• Level 2: A sound explanation (4–6 marks)
• Level 3: A detailed explanation (7–8 marks)

Explanations could include:
• They provide guidance about the aspects of care covered by the policy so that staff know how to handle situations.
• They ensure everyone is working to the same standards and so provide consistency of care.
• They ensure staff know their responsibilities and what is expected of them.
• They make professional conduct clear.
• They ensure legal requirements are met.
• They provide a system of redress.
• They give individuals rights.
• They help service users feel safe and secure.
• They help develop trust between services users and service providers.

L04 How equality, diversity and rights in health, social care and child care environments are promoted

Applying best practice in health, social care and child care environments

1 Describe the benefits for service users of staff using ‘effective communication’. [6 marks]

This is a Levels of Response Question (LOR). Marks are awarded for the quality of the description:
• Level 1: A basic description (1–2 marks)
• Level 2: A sound description (3–4 marks)
• Level 3: A detailed description (5–6 marks)

Descriptions could include:
• If individuals have the information they need it enables informed choices to be made.
• Aids understanding of procedures, treatments or care plans.
• Uses vocabulary that can be understood – no jargon or specialist medical terminology, age-appropriate.
• Uses specialist methods if required, e.g. sign language, hearing loop, interpreter.
• Adapts communication to meet the needs of individuals – repetition, gestures, flash cards, braille.
• Active listening involves demonstrating interest in and responsiveness to what a person is saying.

2 State three ways management could monitor the standard of care that is being provided in a care setting. [3 marks]

1 mark for each way.

Example ways:
• Observations
• Performance management of staff
• Analysis of surveys or questionnaires given to service users, relatives, staff
• Feedback forms
• Analysis of the number and type of complaints.

3 Identify three ways (other than through training) that a care setting could ensure its staff have the knowledge and skills required for their job role. [3 marks]

1 mark for each way.

Example ways:
• Training
• Mentoring
• Meetings to share/discuss good practice
• Workshops
• Care Certificate assessments
• Performance-management targets.
4 Give two benefits of providing staff with training. [2 marks]
1 mark for each benefit.
Example benefits:
• Updates their knowledge.
• Teaches new skills.
• Provides information about new procedures, legislation, etc.
• Raises awareness of issues, e.g. safeguarding, equality, diversity, health and safety.

Explaining discriminatory practice in health, social care or child care environments
1 Describe an example of stereotyping that could occur in a retirement home. [2 marks]
1 mark for a basic statement or 2 marks for a more detailed example that demonstrates understanding.
• Staff always talking very loudly to residents because older people have poor hearing.
• Providing everyone with ‘soft’ food that does not need much chewing because some of the residents have difficulties with chewing and swallowing.

2 Explain ways health and safety could be breached in a primary school. [6 marks]
This is a Levels of Response Question (LOR). Marks are awarded for the quality of the explanation:
• Level 1: A basic explanation (1–2 marks)
• Level 2: A sound explanation (3–4 marks)
• Level 3: A detailed explanation (5–6 marks)
Explanations could include:
• Not carrying out risk assessments for activities or visits.
• Poor food hygiene procedures – risk of cross-contamination or food poisoning.
• Not providing information about new procedures, legislation, etc.
• Equipment not PAT tested, maintained or checked for faults.
• Inadequate supervision or student-to-staff ratio.
• Wet floors.
• Cleaning materials not securely stored.
Other examples appropriate for a primary school are acceptable.

3 Explain how Tony (in Table 2.6 – being patronising) should speak to his patients. [2 marks]
1 mark for each point.
Example ways Tony should communicate:
• Using the person’s preferred name, not ‘love’ or ‘dear’.
• Asking questions and showing interest.
• Using an appropriate tone of voice.
• Using active listening – showing interest in and responsiveness to what the person is saying.
• Using vocabulary that can be understood – no jargon or specialist medical terminology.
• Using specialist methods if required, e.g. sign language, hearing aid.
• Adapting communication to meet the needs of individuals – repetition, gestures, flash cards.

4 Give two examples of inadequate care in a hospital. [2 marks]
1 mark for each example, two required.
Examples could be:
• Medication being given late.
• A patient’s treatment not being explained to them.
• Patients not being asked before touching them in any way.
• Curtains, screens or doors not being properly closed before supporting a person to wash or dress.
• Clothing or hospital gowns not being arranged in a dignified way to preserve modesty.
• Making an individual wait to use the toilet or leaving them too long before you return.

Choosing an appropriate action/response to promote equality, diversity and rights in health, social care and child care environments
1 Explain the meaning of ‘long-term proactive campaigning’. [2 marks]
1 mark for a basic statement or 2 marks for a more detailed example that demonstrates understanding.
• ‘Being proactive’ means taking action intended to cause changes.
• Causing change in order to control a situation.
• Not just responding to the situation after it has happened.
• Providing workshops or training to prevent discriminatory attitudes, not waiting for an incident to occur.

2 Describe how a child who has been making sexist comments could be challenged at the time about their behaviour. [4 marks]
1 mark for each point.
Descriptions could include the following:
• Take them away from the situation.
• Speak to them where other children cannot overhear.
• Explain why what they said is wrong.
• Ask them to reflect on what they said.
• Give them ‘time out’ to think about what they did.
• Encourage them to apologise.

3 Explain how procedures could be used
to challenge a member of staff who has
to a patient.

This is a Levels of Response Question (LOR).
Marks are awarded for the quality of the
explanation:
• Level 1: A basic explanation (1–3 marks)
• Level 2: A sound explanation (4–6 marks)
• Level 3: A detailed explanation (7–8 marks)

Explanations could include:
• Show the individual the relevant policy, e.g.
bullying or equal opportunities, and discuss it
with them to raise their awareness of correct
ways of working so they are aware of how to
behave and what constitutes discriminatory
behaviour.
• The manager could instigate disciplinary
action against the member of staff; this
makes them aware of the seriousness of
what has happened and provides a basis for
changing their attitudes.
• The person could be supervised by a more
senior member of staff so that their work with
the service user can be monitored.
• Address the issue with training, e.g. send the
person on an equality and diversity course.

4 What is meant by the term
‘whistleblowing’? [2 marks]

1 mark for a basic statement or 2 marks for
a more detailed answer that demonstrates
understanding.

Whistleblowing involves raising concerns about
poor practice with the management at the very
highest level or with an outside authority such as
the Care Quality Commission or Ofsted. They will
carry out an investigation and take appropriate
action.

5 Explain how to make a complaint on behalf
of someone who is dissatisfied about the standard
of care her mother is receiving at a residential
nursing home.

This is a Levels of Response Question (LOR).
Marks are awarded for the quality of the
explanation:
• Level 1: A basic explanation (1–2 marks)
• Level 2: A sound explanation (3–4 marks)
• Level 3: A detailed explanation (5–6 marks)

Advice could include:
• Stay calm, reflect on the best way to complain.
• Make notes about the problems with the care
provided.

Unit 3 Health, safety and security
in health and social care

LO1 Potential hazards in health,
social care and child care
environments

Types of hazards

1 Write a definition of the term ‘hazard’. [2 marks]

1 mark for a basic statement or 2 marks for
a more detailed answer that demonstrates
understanding.

A hazard is something that could potentially
harm someone or cause an adverse effect on
health.

2 Give two examples of hazards that could be
found on a hospital ward. [2 marks]

1 mark for each example.

Examples could include:
• Medical hazards – e.g. dressings, syringes,
body fluids
• Chemical hazards – e.g. medicines, cleaning
materials
• Environmental hazards – e.g. worn or
damaged equipment potentially could cause
injury; furniture, cables and equipment can be
trip hazards
• Physical hazards – X-rays, manual handling,
long-term use of display screen equipment
• Working conditions and working practices
hazards – excessive working hours, lack of
staff.

3 Explain the potential hazards that could be found
in a nursery playroom. [8 marks]

This is a Levels of Response Question (LOR).
Marks are awarded for the quality of the
explanation:
• Level 1: A basic explanation (1–3 marks)
• Level 2: A sound explanation (4–6 marks)
• Level 3: A detailed explanation (7–8 marks)

Explanations could include:
• Toys – broken, trip hazards, choking hazards
• Clutter – trip hazards
• Flooring/stairs – worn, wet, clutter, potential
for trips and falls
• Nappies – contact with body fluids, infections
Now test yourself answers

Cambridge Technicals Level 3 Health and Social Care

4 Explain the potential hazards for an office worker at a primary school of spending most of his or her working day using a computer. [6 marks]

This is a Levels of Response Question (LOR). Marks are awarded for the quality of the explanation:

- Level 1: A basic explanation (1–2 marks)
- Level 2: A sound explanation (3–4 marks)
- Level 3: A detailed explanation (5–6 marks)

Explanations could include:
- Incorrect posture causing discomfort
- Stress injuries or RSI – wrist and hand position need to be correct
- Muscular aches and pains
- Backache
- Badly positioned screen
- Poor lighting and glare on screen
- Eye strain
- Dry eyes
- Headaches
- Poorly adjusted chair back and height.

Potential impacts of hazards for individuals who require care or support, employees and employers

1 a Identify the four main impacts of hazards. [4 marks]

1 mark each:
- Injury or harm
- Illness
- Poor standards of care
- Financial loss.

b Give two specific examples of an injury or effect for each type of impact you identified in part (a). [8 marks: 4×2]

A wide range of examples are acceptable as long as they are relevant to the impacts identified in part (a).
- **Injury or harm:** back injuries, slipped disc, injured muscles, chemical burns, cuts and bruises, deafness, fractures, radiation, threat from burglars and intruders
- **Illness:** eye strain, food poisoning, high blood pressure, infections, mental-health problems (anxiety, depression, disempowerment, burnout)
- **Poor standards of care:** late or incorrect medication, pressure sores, bruising, dehydration, illness gets worse, malnutrition

2 Describe the potential musculoskeletal hazards and their impacts on a care assistant in a nursing home. [8 marks]

This is a Levels of Response Question (LOR). Marks are awarded for the quality of the description:

- Level 1: A basic description (1–3 marks)
- Level 2: A sound description (4–6 marks)
- Level 3: A detailed description (7–8 marks)

Answers could include descriptions of:
- Musculoskeletal hazards in a nursing home:
  - Lifting and handling – transferring and manual handling
  - DSE (display screen equipment) – using a computer for long periods
- Impacts:
  - Injury – any relevant injuries, e.g. strained back, slipped disc
  - Absence, being unable to work
  - Headaches
  - Being unable to focus, tiredness, lack of concentration
  - Compensation may be pursued
  - Loss of earnings if time off due to illness/injury
  - Loss of job; negligence.

Harm and abuse

1 Explain the difference between intentional abuse and unintentional abuse. [4 marks: 2+2]

2 marks for each explanation. 1 mark for a basic statement or 2 marks for a more detailed answer that demonstrates understanding.

- **Intentional abuse:** This type of abuse is deliberate. Examples include: theft, verbal abuse, financial abuse, sexual abuse and physical abuse.
- **Unintentional abuse:** This type of abuse can be caused by a careless approach to tasks, a lack of training to do a task correctly or as a result of neglect. Examples include poor care of a hospital patient leading to pressure sores, or a nursing home resident suffering from dehydration due to their fluid intake not being monitored. A catering assistant in a primary school forgetting to wash their hands before preparing food could cause cross-contamination and lead to an outbreak of food poisoning.

2 State possible consequences for a teacher who has been verbally abusing a student. [4 marks]

Any four from:
- Disciplinary action
- Suspension

Cambridge Technicals Level 3 Health and Social Care
3 Identify five possible effects for someone experiencing physical abuse. [5 marks]
1 mark for each effect, five required.
Examples include:
• Anger
• Anxiety
• Becoming withdrawn
• Death
• Denial
• Depression
• Disempowerment
• Embarrassment
• Fear
• Feeling betrayed
• Financial hardship
• Illness, health deterioration
• Injury
• Lack of sleep
• Loss of confidence
• Loss of trust
• Low self-esteem
• Self-blame
• Self-harm
• Suicidal feelings.

4 Identify two child care and two health care environments. [4 marks: 2+2]
1 mark for each environment, two required.
Examples could be:
• Child care environments:
  - Breakfast club
  - Childminder
  - Children’s centre
  - Children’s home
  - Crèche
  - Foster home
  - Kindergarten
  - Nursery
  - Playgroup
  - Pre-school
  - Primary school.
• Health care environments:
  - Clinic
  - Dental practice
  - Drop-in centre
  - GP surgery
  - Health centre
  - Hospital
  - Medical centre
  - Nursing home
  - Optician
  - Pharmacy.

LO2 How legislation, policies and procedures promote health, safety and security in health, social care and child care environments

Legislation: Health and Safety at Work Act 1974

1 Identify four aspects of the role of the HSE. [4 marks]
1 mark each. Any four from:
• Is the regulator for health and safety in the workplace.
• Responsible for monitoring health and safety in the workplace.
• Does spot checks on the workplace.
• Carries out investigations if an accident has occurred.
• Enforces health and safety legislation.
• Issues improvement notices.
• Can fine settings.
• Can take employers/employees to court.
• Provides guidance and advice on how to minimise risks in the workplace.

2 Explain the health and safety responsibilities of Sally, who works in a children’s nursery. [8 marks]
This is a Levels of Response Question (LOR). Marks are awarded for the quality of the explanation:
• Level 1: A basic explanation (1–3 marks)
• Level 2: A sound explanation (4–6 marks)
• Level 3: A detailed explanation (7–8 marks)
Answers could include explanations of:
• Sally should co-operate with her employer or nursery manager by following health and safety regulations in the workplace.
• Sally should report any hazards to the member of staff responsible for health and safety or to the nursery manager.
• Sally must not misuse or tamper with equipment provided that meets health and safety regulations, e.g. fire extinguishers.
• Sally should take care of herself and others in the nursery.
• Sally should wear any protective clothing that is provided.
• Sally should take part in any health and safety training provided.
Other, appropriate and relevant, alternative examples are acceptable.

3 State three management responsibilities identified by the Management of Health and Safety at Work Regulations 1999. [3 marks]
1 mark each. Any three from:
• That risk assessments are carried out.
• That any control measures required are implemented.
• That competent individuals are appointed to manage health and safety and security, and to deal with emergencies that may occur.
• That information and training are provided so that work activities can be carried out safely.
• That appropriate supervision is provided so that work activities can be carried out safely.

Legislation: Food safety legislation
1 Identify four key aspects of the Food Safety Act. [4 marks]
1 mark each. Any four from:
• Requires that food safety hazards are identified.
• Settings should know which steps in their setting are critical for food safety.
• Safety controls must be in place, maintained and reviewed.
• Food handlers must wear suitable clean and appropriate protective clothing.
• Food handlers must be supervised and/or trained in food hygiene to a level appropriate for their job.
• The environment where food is prepared and cooked must be kept clean and in good condition.
• Requires adequate arrangements for storage and disposal of waste.

2 State three food safety requirements of a care home manager regarding the safe preparation of food. [3 marks]
1 mark each. Any three from:
• Food safety controls and procedures must be in place and reviewed regularly.
• Food preparation and serving areas must be well maintained.
• Employers must provide appropriate facilities for personal hygiene.
• Employers must provide clean protective clothing (PPE) – hygiene hats, disposable gloves, aprons.
• Food provided must be safe to eat.
• Records must be kept of where food is from so that it is traceable.

3 State three food safety requirements of an employee preparing food for residents in a care home. [3 marks]
1 mark each. Any three from:
• Employees must maintain high standards of personal hygiene.
• Employees who prepare and serve food should be provided with training in food safety.
• Food should be stored correctly.
• Meals should be prepared, cooked and served hygienically and safely.
• Employees must wear PPE provided, e.g. hygiene hat, disposable gloves and apron.

4 Identify four critical-control points used to identify safety hazards in the preparation of food. [4 marks]
1 mark each. Any four from:
• Packaging/food containers
• Work surfaces
• Food processing equipment
• Cookware
• Personal hygiene.

1 Your supervisor asks you to move a very large box of paper towels that has been delivered. It is not heavy. What should you do? Choose two correct answers from the list below. [2 marks]
1 mark each.
The correct answers are:
A Say that you can’t help with this as you have not been trained for manual handling, if that is the case.
B Leave the box where it is – someone else can move it.
C Ask a colleague to help you lift the box if you have both completed manual handling training.
D Struggle to lift the box – you don’t want to look weak in front of your colleagues.

2 Give reasons for your two chosen answers to Question 1. [2 marks]
1 mark each.
A Say that you can’t help with this as you have not been trained for manual handling, if that is the case.
– This is correct because an employee should not undertake manual handling of any kind if they have not received training.
C Ask a colleague to help you lift the box if you have both completed manual handling training.
– This is correct as the box is very large and so would be awkward and have the risk of injuring an individual trying to lift it on their own, so a second person is required to carry out the lift. As both are trained they know how to lift it safely.
3 Describe the safe posture for lifting something up from the floor. [5 marks]

Descriptions should include the following five points:
• Stand with your feet apart.
• Bend the knees.
• Keep the back straight.
• Lean slightly forward to get a grip of the item.
• Lift smoothly.

4 Give three reasons why the training session shown in Figure 3.5 is an example of good practice. [3 marks]

1 mark each. Reasons could include:
• It involves practical work – learning by doing.
• It is interactive – can ask for advice.
• The trainer is observing and so can identify and put right anything the trainee is not doing safely.
• It is in a real-world situation, using real equipment.
• The dummy not a real patient so there is no risk of causing an injury.

Other, appropriate and relevant, alternative reasons are acceptable.

Legislation: Reporting of Injuries, Diseases and Dangerous Occurrences Regulations 2013

1 Indicate which of the following incidents are reportable and which are not. Put a tick beside those that are reportable, and put a cross beside those that are not reportable. [6 marks]

- A nursing home resident is scalded by hot bath water and taken to hospital for treatment. The patient is frail and elderly and adequate precautions were not taken. ✓
- A children’s nursery assistant is off work with influenza for two weeks. ✗
- A care home resident requires hospital treatment after sliding through a sling while being hoisted from a chair. The wrong-sized sling was used. ✓
- A laboratory worker suffers from typhoid after working with specimens containing typhoid. ✓
- A surgeon suffers dermatitis associated with wearing latex gloves during surgery. ✓
- There is a collision between two vehicles in a hospital car park and no one is injured. ✗

No other answers are acceptable.

2 Give four reasons for the importance of keeping records of accidents and incidents in a care setting. [4 marks]

1 mark each. Reasons could include:
• It enables employers to collect information to help them properly manage health and safety risks in their workplace.
• It is good practice to record all accidents as this can inform future risk assessments in order to improve future safety standards.
• The information can be used as an aid to risk assessment.
• It helps inform and develop solutions to known risks.
• It helps prevent injuries and ill-health in the future.
• It helps control costs from accidental loss or fines as the setting learns from experience.

Other, appropriate and relevant, alternative reasons are acceptable.

Legislation: The Data Protection Act 1998

1 Identify three types of data that would be found in a health care setting. [3 marks]

1 mark each. Any three from:
- Patient medical records
- Staff personal details and employment records
- Emails
- Minutes of meetings
- Faxes
- Prescription forms
- Staffing plans and rotas
- Operating theatre schedules.

Other, appropriate and relevant, alternative types of data, are acceptable.

2 A resident has left a care home and their paper-based records are no longer required. Suggest one way they could be securely destroyed. [1 mark]

Any one from:
- Shred the documents.
- Incinerate or burn the documents.
- Use a company that destroys confidential waste.

No credit for ways of destroying electronic records as question asks for paper-based.

Legislation: The Civil Contingencies Act 2004

1 State three types of major incident. [3 marks]

1 mark each. Any three from:
- An explosion or suspect package
- Extreme weather conditions
1. A fire
2. Flooding
3. A hazardous materials (hazmat) release, such as chemicals, biological, radiation or nuclear
4. A major transport accident
5. An outbreak of an infectious disease
6. Pandemic influenza
7. A power or other utility failure
8. A terrorist event.

Now test yourself answers

Cambridge Technicals Level 3 Health and Social Care

2
Name three examples of contingency plans.
1 mark each. Any three from:
• Major incident plans
• Plans for management of mass casualties
• Shelter and evacuation planning
• Fire response plans
• Lockdown or controlled-access plans.

3
Give one example of a major incident that has occurred in the UK and describe what type of response planning would have needed to be in place under the Civil Contingencies Act to manage the incident.

Examples of major incidents: Salisbury chemical attack; Grenfell Tower fire; Manchester Arena bombing; London Bridge and Borough Market terrorist attacks; Westminster Bridge/Parliament terrorist incident.

Legislation: Control of Substances Hazardous to Health 2002

1
Identify three substances that are hazardous to health that could be found in a residential nursing home.
1 mark each.
Examples:
• Bleach
• Cleaning materials

2
Identify four things you would check for on a bottle of prescription pills before administering them to a patient.
1 mark each.
Answers could include:
• Name of the person the pills are prescribed for.
• Whether the pills are still in date.
• When the pills should be taken – e.g. before or after a meal, before bed, in the morning.
• How often the pills should be taken – e.g. every 4 hours, once a day, 3 times daily.
• How pills should be taken – e.g. with water, dissolved in water, with food.

3
Why should cleaning products always be kept in their original containers?
1 mark for a basic statement or 2 marks for a more detailed answer that demonstrates understanding.
• Could otherwise be misleading – e.g. bleach in a lemonade bottle.
• Could otherwise be dangerous – e.g. someone might drink the ‘lemonade’ without realising it is bleach.
• Instructions about how to use the product would be lost if transferred to another container.
• Instructions for use of hazardous products are important to prevent injuries/illness.
• Instructions for dealing with spillages would be lost.

4
Identify the six pieces of information that a COSHH file should have about a hazardous substance.
1 mark each.
The COSHH file should:
• identify and name the hazardous substance
• state where the hazardous substance is kept
• identify what the hazardous labels on the container mean
• describe the effects of the substances
• state the maximum amount of time it is safe to be exposed to them
• describe how to deal with an emergency involving the hazardous substance.
Safeguarding

1 Give a definition of ‘safeguarding’.  
   2 marks
   1 mark for a basic statement or 2 marks for a more detailed answer that demonstrates understanding.
   Safeguarding means the measures taken to protect people’s health, wellbeing and rights, enabling them to be kept safe from harm, abuse and neglect.

2 Name and describe the three types of DBS check.  
   6 marks: 3×2
   1 mark for naming each type of check and 1 mark for describing each type of check.
   The three types of DBS check:
   • Standard – checks for criminal convictions, cautions, reprimands and final warnings.
   • Enhanced – an additional check of any information held by police that is relevant to the role being applied for.
   • Enhanced with list checks – additionally checks the Barred List.

3 What is the Barred List?  
   2 marks
   1 mark for a basic statement or 2 marks for a more detailed answer that demonstrates understanding.
   The Barred List is a list of individuals who are on record as being unsuitable for working with children or vulnerable adults. This means they are ‘barred’ (not allowed) to do this kind of work.

4 Give three reasons why some individuals may be more at risk of abuse than others.  
   3 marks
   1 mark each, three required.
   Reasons could include individuals who may not want to, or be able to, report abuse, maltreatment or neglect, because they:
   • have a learning disability
   • have a physical disability
   • have a sensory impairment (blindness, deafness)
   • lack mental capacity (dementia, comatose)
   • are looked-after children (children in care).
   Other, appropriate and relevant, alternative reasons are acceptable.

Influences of legislation

1 Give a definition of ‘premises’.  
   1 mark
   Premises mean a building, together with its outbuildings and grounds; a place where services are provided.

2 Explain the influence of health and safety legislation on premises.  
   8 marks
   This is a Levels of Response Question (LOR). Marks are awarded for the quality of the explanation:
   • Level 1: A basic explanation (1–3 marks)
   • Level 2: A sound explanation (4–6 marks)
   • Level 3: A detailed explanation (7–8 marks)
   Answers could include explanation of:
   • All health, social care and child care environments have to maintain high levels of hygiene in all aspects of care, nursing, general cleanliness of the setting and personal hygiene.
   • Any care settings providing food must comply with food safety regulations. Settings are checked on a regular basis by environmental health inspectors.
   • Risk assessments for activities and equipment must be carried out to ensure the safety of all who work in or use the care setting.
   • Health and safety law requires fire exits to be kept clear and well signposted; fire extinguishers should be available by exits and fire blankets in kitchens. Special evacuation equipment should be available if needed depending on the type of setting, for example evac chairs. Visual and audio alarms should be in place.
   • The Equality Act 2010 requires that adaptions should be made to provide access for those with disabilities. Adaptions could include provision of disabled parking spaces near to the building, automatic doors, wide doorways, disabled toilets, ramps for wheelchair access, and lowered reception desk or tables.
   • The Health and Safety at Work Act requires that all work-related accidents, injuries and diseases (where appropriate) will be reported according to RIDDOR regulations.
   • Regular fire drills will take place to ensure everyone knows what to do in an emergency and where to go.
   • Data protection principles will be implemented, for example to ensure the safety and security of patient records.
   • Safeguarding training will ensure that staff are able to identify signs of abuse; service users will be aware of the procedures to raise a concern.
   • Staff will be provided with training as required for their role.
• Managers will develop policies, for example for health and safety, safeguarding, manual handling, evacuation and fire procedures.
• Managers will ensure safe staffing levels in a care home and adequate child-to-teacher ratios in a school or nursery.
Other, appropriate and relevant, alternative examples are acceptable.

Implementation of policies and procedures: Health and safety management systems

1 Explain the purpose of carrying out risk assessments. [6 marks]
This is a Levels of Response Question (LOR). Marks are awarded for the quality of the explanation:
• Level 1: A basic explanation (1–2 marks)
• Level 2: A sound explanation (3–4 marks)
• Level 3: A detailed explanation (5–6 marks)
Explanations could include:
• To meet legal requirements.
• To check that equipment is safe and fit for purpose.
• To ensure that the care setting building itself is safe.
• To identify potential dangers, e.g. trip hazards, risky activities.
• To work out what could go wrong with an activity.
• To assess how much supervision is needed.
• To identify ways of controlling and minimising risks.
• To ensure any planned trips or visits are safe to proceed.

2 Give the five stages of a risk assessment. [5 marks]
1 mark each.
The five stages of a risk assessment:
• Look for hazards associated with the activity.
• Identify who might be harmed and how.
• Consider the level of risk – decide on the precautions or control measures needed to reduce the risk.
• Make a record of the findings.
• Review the risk assessment regularly and improve precautions or control measures if necessary.

3 Give four reasons why it is important to carry out risk assessments. [4 marks]
1 mark each.
Reasons could include:
• It is a legal requirement under the Health and Safety at Work Act. The written record provides evidence that the risk assessments have been carried out.

Implementation of policies and procedures: Policies

1 Describe the fire evacuation procedure for a residential care home for young people with physical and learning disabilities. [8 marks]
This is a Levels of Response Question (LOR). Marks are awarded for the quality of the description:
• Level 1: A basic description (1–3 marks)
• Level 2: A sound description (4–6 marks)
• Level 3: A detailed description (7–8 marks)
Description of fire evacuation procedures could include:
• If you discover a fire, raise the alarm – alert people in the immediate area, activate alarm system, call 999.
• All staff to remove people from the immediate area – direct them to the fire assembly point, use designated fire exits, never use lifts.
• Designated staff assist residents with:
  – mobility difficulties (use of evac chairs or wheelchairs)
  – learning/sensory difficulties (may be confused/unaware of what is happening).
• Staff to close doors and windows and switch off lights as they leave.
• Staff evacuating the building must check their locality is clear.
• Everyone to assemble at designated external assembly point to await further instructions.
• Do not re-enter the building until told it is safe to do so.
• Carry out a head count to ensure everyone is accounted for.
• Senior staff to inform fire brigade if anyone is left in the building.
For Level 2 and Level 3 marks: Answers must specifically address the evacuation of individuals with physical and learning disabilities.

2 What are the responsibilities of an asbestos ‘duty to manage’ holder? [6 marks]
1 mark for each responsibility, six required.
Asbestos ‘duty to manage’ responsibility holders have to:
• Find out if asbestos is present.
• Make a record of the location, type and condition of the asbestos.
• Assess the risk of anyone being exposed to the asbestos.
• Prepare a plan on how to manage these risks.
• Put the plan into action, monitor it and keep it updated.
• Provide this information to anyone who might work on or disturb the asbestos.

Implementation of policies and procedures: Electrical and food safety and safeguarding

1 State three visual checks for electrical safety. [3 marks]
1 mark each. Any three from:
• Checking for damage to cables.
• Checking for damaged plugs.
• Checking for broken socket covers.
• Checking for damaged or worn equipment.

2 Read the Progress Community Academy safeguarding information shown in Figure 3.10. Explain why having this on the academy’s website is good practice. [6 marks]
This is a Levels of Response Question (LOR). Marks are awarded for the quality of the explanation:
• Level 1: A basic explanation (1–2 marks)
• Level 2: A sound explanation (3–4 marks)
• Level 3: A detailed explanation (5–6 marks)
Explanations could include:
• Easy access on the website.
• Named persons to contact.
• Provides a reporting system for safeguarding concerns.
• Male and female contacts given.
• Out-of-hours points of contact – NSPCC and Childline.
Other, appropriate and relevant, alternative explanations are acceptable.

3 List five procedures that should be part of a food hygiene and safety policy. [5 marks]
1 mark each. Any five from:
• Ensure all work surfaces and equipment are clean before preparing food.
• Clean surfaces with hot water and antibacterial washing up liquid, then use an antibacterial spray – these sprays do not remove grease and dirt, so should be used after cleaning.
• Wash fruit and vegetables before use.
• Use the correct coloured chopping boards when preparing meals to keep raw and cooked food separate, avoiding cross-contamination that could lead to food poisoning.
• Clear away used equipment and spilt food as you work.
• Use correct food storage methods.
• Check ‘use by’ and ‘eat by’ dates.
• Cook food thoroughly to kill bacteria – a food temperature probe or meat thermometer should be used to check that food has reached 75°C or above.
• Keep food covered to prevent contamination.
• Serve food as soon as it is cooked so that bacteria do not have time to multiply.

Implementation of policies and procedures: Chemical and biological health hazards

1 Give three examples of chemical hazards found in care settings. [3 marks]
1 mark each. Any three from:
• Cleaning liquids and sprays
• Bleach
• Disinfectants
• Medication.

2 Describe how hazardous waste materials should be disposed of in a care setting. [6 marks]
This is a Levels of Response Question (LOR). Marks are awarded for the quality of the description:
• Level 1: A basic description (1–2 marks)
• Level 2: A sound description (3–4 marks)
• Level 3: A detailed description (5–6 marks)
Answers could include descriptions of:
• Clinical waste and dressings: Yellow bags; incinerated/burnt.
• Body fluids, urine, faeces: Flushed down toilet.
• Medication (out of date or no longer required): Taken to local pharmacy or GP surgery.
• Needles, sharps, syringes: Yellow (sharps) box or contact local council to collect.
• Soiled linen: Red bags put directly into the washing machine; bags dissolve. Wash at high temperature.

3 Who is allowed to give out medication in a care setting? [1 mark]
Only staff who have been trained in medicines procedures.

4 Give three examples of guidance that should be part of medicines procedures. [3 marks]
1 mark each. Any three from:
• Controlled drugs should be stored in a locked cupboard.
• Check that the right person is receiving the correct medication.
• Ensure medication is given at the right time and frequency.
• Record medicine administered on the medicines record.
• Ensure medicines records are accurate and clear.

Implementation of policies and procedures: Lone working

1 What is the meaning of ‘lone working’? [2 marks]
1 mark for a basic statement or 2 marks for a more detailed answer that demonstrates understanding.

Lone workers are individuals who work in the community in a separate location to their team or manager. Examples include: social workers; personal care staff, e.g. domiciliary care assistants who visit people in their own homes; personal assistants; home tutors; family support workers.

2 State three risks of lone working. [3 marks]
1 mark for each risk, three required.
Risks could be:
• Staff are often required to work at all hours, including late at night.
• Social workers may have to take children away from their home. This is often a highly intense and emotional experience for parents, children and social workers.
• Personal care staff can be mistaken for health visitors carrying drugs and may be attacked.
• Personal care staff are often on foot and have regular patterns of visits. This may make them more vulnerable as targets for assault.

3 How does monitoring who has keys provide security in a care setting? [2 marks]
1 mark for each point, two required.
• Having a list of key holders means the whereabouts of all sets of keys is known at all times.
• A limited number of people will have keys so access is controlled.
• Can help prevent intruders entering the building.

4 Identify four ways care home staff could ensure security for their residents. [4 marks]
1 mark for each example, four required.
Examples could include:
• Staff wearing ID lanyards.
• Having electronic security pads with PIN code entry.
• Locking external doors and gates.
• Having a staffed reception desk.
• Having window locks or restraints.
• Escorting visitors.
• CCTV monitoring external entrances.
• Monitoring of keys.
• Issuing visitor badges.

Other, appropriate and relevant, alternative examples are acceptable.

Implementing policies in different care situations

1 What is the difference between a policy and a procedure? [4 marks: 2+2]
2 marks for each definition: 1 mark for a basic statement or 2 marks for a more detailed answer that demonstrates understanding.
• A policy is a plan that outlines the policy purpose and the instructions for carrying out the necessary actions to achieve its aim of keeping service users safe and of promoting their rights. Policies also ensure that the care setting is complying with the requirements of legislation.
• Procedures provide a step-by-step guide of how to complete a task or of how to implement a policy.

2 Explain why it is important to review policies and procedures regularly. [6 marks]
This is a Levels of Response Question (LOR). Marks are awarded for the quality of the explanation:
• Level 1: A basic explanation (1–2 marks)
• Level 2: A sound explanation (3–4 marks)
• Level 3: A detailed explanation (5–6 marks)
Explanations could include:
• To ensure they reflect any changes in legislation.
• To keep them up to date.
• To identify any issues or deficiencies that need addressing.
• To check that they still meet the setting’s needs and aims.
• To develop new policies for new needs or situations.
• To check that they are being implemented effectively.
• To ensure that they are adequate for their purpose.
• To amend in the light of experience.
Other, appropriate and relevant, alternative reasons are acceptable.

LO3 Roles and responsibilities involved in health, safety and security in health, social care and child care environments

Roles and responsibilities

1 Give three ways a local authority can enforce health and safety standards. [3 marks]
1 mark for each way, three required.
Ways include:
- It can carry out inspections and make recommendations for improvements.
- It can send advisory letters.
- It can re-inspect.
- It can prosecute premises if they do not maintain adequate standards.
- It is responsible for enforcement of food safety legislation through environmental health and Trading Standards.

2 Give two examples of an employer’s responsibilities for health and safety policies for each of the following: ‘Promoting’, ‘Maintaining’, ‘Enforcing’. [6 marks]

1 mark for each example, two examples required for each.

Promoting:
- Ensuring all relevant health and safety policies are in place.
- Ensuring all staff are aware of their responsibilities as stated in the relevant policies.
- Ensuring health and safety training is provided.
- Ensuring appropriate staff are recruited, i.e. DBS checked, suitably qualified and/or experienced.

Maintaining:
- Keeping up to date with legislation.
- Updating policies regularly.
- Recording and following up all accidents and incidents.
- Providing induction training for new staff.
- Providing ongoing training.
- Checking the setting for health and safety issues, i.e. carrying out risk assessments, doing safety walks.
- Staff supervision.

Enforcing
- Regular fire-drill evacuation practices.
- Ongoing monitoring and supervision; training.
- Managing response to external checks, e.g. CQC or Ofsted inspections.
- Monitoring whether policies for staff ratios, levels of supervision and working hours are being complied with.
- Implementing disciplinary procedures as and when required.

3 Who is responsible for reporting a hazard? [1 mark]

Everyone has the responsibility to report hazards – management, employees, visitors, individuals using health, social care and child care environments and their families.

Consequences of not meeting responsibilities

1 Describe possible consequences for a residential care home owner of not following food hygiene regulations, causing residents to become seriously ill with food poisoning. [6 marks]

This is a Levels of Response Question (LOR). Marks are awarded for the quality of the description:
- Level 1: A basic description (1–2 marks)
- Level 2: A sound description (3–4 marks)
- Level 3: A detailed description (5–6 marks)

Answers could include:
- The setting being sued for negligence by residents or patients and their families, or staff
- Compensation claims
- Fines
- Poor reputation for the care setting; could result in closure
- Loss of business income
- Prosecution for breaching regulations – could lead to a custodial sentence in very serious cases
- Increased monitoring of the setting, e.g. CQC, local authority inspections and re-inspections.

Other, appropriate and relevant, alternative examples are acceptable.

2 Give three possible consequences for an employee who injures a patient when carrying out a lift using a hoist she is not trained to use. [3 marks]

1 mark for each consequence, three required.

Consequences include:
- Dismissal of the employee.
- Disciplinary procedures instigated: verbal warning, first written warning, final written warning, suspension, dismissal (stage depends on previous performance).
- Requirement for the employee to undergo further training or re-training.
- Potential prosecution for breaching regulations.

3 What does being ‘struck off’ a professional register mean? [2 marks]

Being ‘struck off’ from a professional register can involve:
- not being allowed to practise at all
- the loss of professional status and reputation.
LO4 Responding to incidents and emergencies in a health, social care or child care environment

Incidents and emergencies

1 How would you deal with a care-home resident’s son who was under the influence of alcohol and demanding to see his mother late at night? [3 marks]

1 mark for each way, three required.
The response could involve:
• Stay calm.
• Speak firmly and clearly – ask him to leave.
• Alert other staff.
• Keep residents away from the incident.
• Call the police if he persists and refuses to leave.
• Keep yourself safe – do not put yourself at risk.

Other, appropriate and relevant, alternative examples are acceptable.

2 Give three reasons why it is important to have a follow-up review of critical incidents and emergencies. [3 marks]

1 mark for each reason, three required.
• To identify if counselling and support services are needed for those who were involved.
• To review policies and procedures – did they work, are amendments required?
• It provides recommendations for future practice.

Other, appropriate and relevant, alternative examples are acceptable.

Responsibilities of a first aider

1 What is meant by the ‘Three P’s’? [3 marks]

1 mark for each of the Three P’s:
• Preserve life
• Prevent further injury
• Promote recovery.

2 Identify three responsibilities of a first aider and explain why each is important. [6 marks: 3×2]

1 mark for each responsibility and 1 mark for each explanation. Three required.
• Clear the immediate environment – remove bystanders, etc.
• Assess and make the area safe – so there is no further injury/harm.
• Check vital signs – are they breathing, are they conscious, is there a pulse?
• Attempt only what can be done safely – to prevent further injury.
• Give immediate assistance to the casualty – CPR, cold water on a burn, recovery position, etc.
• Get help – summon an ambulance or other professional help.

Additional reasons:
• Aim to preserve life.
• Aim to limit worsening of condition.
• Aim to promote recovery.

3 Describe three ways to reassure a casualty while waiting for an ambulance. [6 marks: 3×2]

2 marks for each way described, three required.
Providing reassurance:
• Use a calm and confident voice – to help relax the casualty so they don’t panic.
• Don’t speak too quickly – so they can clearly hear what is being said.
• Say help is on the way – calms them down.
• Make eye contact – so they know you are helping them and listening to what they say.
• Get down to their level – makes them feel more comfortable and makes it easier to communicate.

Other, appropriate and relevant, alternative examples are acceptable.

4 a Describe the steps of the first aid response of a care assistant who finds an elderly female resident lying on the floor of her bedroom due to a fall. [6 marks: 3×2]

2 marks for each step, three required.
• Assess – ABC check (airway, breathing, circulation).
• Ensure the casualty is safe on the floor – that nothing is posing a further risk.
• Obtain medical help – dial 999.
• Give plenty of reassurance – stay with them.
• Keep the casualty as still as possible – to prevent further injury.

Other, appropriate and relevant, alternative examples are acceptable.

b Give two ways the care assistant can maintain the respect and dignity of the elderly resident. [2 marks]

1 mark for each way.
• Send ‘spectators’ away.
• Cover body parts to maintain dignity.
• Make sure clothing is pulled down and covers her properly so she is ‘decent’.
Unit 4 Anatomy and physiology for health and social care

LO1 The cardiovascular system, malfunctions and their impact on individuals

Blood
1 Where are red blood cells produced? In the a) kidneys, b) spleen, c) bone marrow or d) liver? [1 mark]
   c Bone marrow.
2 Which of the following do red blood cells transport: a) oxygen, glucose and carbon dioxide, b) oxygen and carbon dioxide, c) oxygen, carbon dioxide and other waste products, d) oxygen and glucose? [1 mark]
   b Oxygen and carbon dioxide.
3 a What are B-cells and T-cells two types of? [1 mark]
   Lymphocytes.
   b What is the function of B-cells and T-cells? [2 marks]
      One mark for each function:
      • B-cells produce antibodies to destroy antigens [micro-organisms] such as bacteria, viruses and toxins.
      • T-cells destroy the body’s own cells that have been taken over by viruses or have become cancerous.
4 Which component of blood carries fibrinogen and hormones? [1 mark]
   Plasma
5 State the function of platelets. [2 marks]
   Any two from:
   • They help to form blood clots...
   • ...by clumping together...
   • ...which slows or stops bleeding...
   • ...to help wounds heal.

The heart
1 Explain why the muscle layer is thicker in the left ventricle than in the right ventricle. [2 marks]
   1 mark for a basic statement or 2 marks for a more detailed answer that demonstrates understanding.
   Because the left ventricle has to pump blood around the systemic circulation, whereas blood from the right is only going as far as the lungs.
2 What is the function of the pulmonary valve? [2 marks]
   1 mark for a basic statement or 2 marks for a more detailed answer that demonstrates understanding.
   The pulmonary valve is at the opening from the right ventricle and stops blood going back from the pulmonary artery into the heart.
3 Describe pulmonary and systemic circulation. [4 marks: 2+2]
   2 marks for each description. 1 mark for a basic statement or 2 marks for a more detailed answer that demonstrates understanding.
   • Pulmonary: The right side of the heart receives deoxygenated blood from the body and pumps it back to the lungs.
   • Systemic: The left side of the heart receives oxygenated blood from the lungs and pumps it to the rest of the body.

Control and regulation of the cardiac cycle
1 Describe the location and role of the SA node of the heart. [3 marks]
   1 mark for each point:
   • The SA node is situated in the upper wall of the right atrium of the heart.
   • It is known as the ‘pacemaker’ and is responsible for setting the rhythm of the heart.
   • It ensures both atria contract simultaneously.
2 Describe the location and role of the AV node of the heart. [3 marks]
   1 mark for each point:
   • The AV node is situated at the bottom of the right atrium of the heart.
   • It is responsible for delaying the electrical impulses it receives from the SA node.
   • This delay allows time for blood to empty out of the atria into the ventricles.
3 Describe the structure and function of Purkinje fibres. [3 marks]
   1 mark each. Any three from:
   • They are specialised cardiac muscle fibres.
   • They are very fine.
   • They rapidly transmit impulses.
   • They transmit impulses from the atrioventricular node to the ventricles.
4 What does a normal ECG trace show? [2 marks]
   1 mark for a basic statement or 2 marks for a more detailed answer that demonstrates understanding.
   An electrocardiogram (ECG) trace shows the spread of the electrical signal generated by the SA node as it travels through the atria, the AV node and the ventricles. A normal ECG trace shows five waves, named P, Q, R, S and T.
5 Explain the meaning of the P, Q, R, S and T waves on an ECG trace. [5 marks]
One mark each:
• The P wave at the beginning shows atrial contraction.
• The QRS complex show ventricular contraction [systole].
• The T wave shows ventricles relaxing [diastole].

Types, structure and functions of blood vessels
1 Describe the structure of an artery. [2 marks]
1 mark for a basic statement or 2 marks for a more detailed answer that demonstrates understanding.
• Arteries have small internal diameters and their walls consist of several layers of thick, elastic fibres and muscle.
• Arteries do not have valves except at the base of the large arteries leaving the heart.

2 Describe the structure of a vein. [2 marks]
1 mark for a basic statement or 2 marks for a more detailed answer that demonstrates understanding.
• Veins have large internal diameters and thin walls.
• Veins have valves through their length.

3 Describe the functions of arteries, veins and capillaries. [6 marks: 3×2]
Two functions for each, 1 mark each:
Arteries:
• Carry blood away from the heart.
• The blood being carried is oxygenated.
Veins:
• Carry deoxygenated blood back to the lungs.
• Have valves to prevent backflow.
Capillaries:
• The thin walls of capillaries allow the exchange between blood and the surrounding tissues...
• ...of water, oxygen, carbon dioxide, nutrients and waste.

4 Give three main differences between veins and arteries. [3 marks]
1 mark each. Any three from:
• An artery cross-section is round; a vein cross-section is oval.
• The internal diameter of arteries is small; the internal diameter of veins is larger.
• Arteries do not have valves except at the base of the large arteries leaving the heart; veins have valves to prevent backflow.
• Artery blood flows in pulses; vein blood flows smoothly with a squeezing action.
• Artery blood being carried is oxygenated; vein blood being carried is deoxygenated.
• Artery blood is carried away from the heart; vein blood is carried towards the heart.

Formation of tissue fluid and lymph
1 Identify three roles of the lymphatic system. [3 marks]
1 mark each. Any three from:
• It is a drainage and filtrations system.
• It removes excess fluid from body tissues.
• It absorbs fatty acids, and transports fat into the bloodstream to be absorbed in the small intestine.
• It produces white blood cells, which in turn produce antibodies.

2 What is the difference between lymph and interstitial [tissue] fluid? [2 marks]
• Interstitial fluid bathes the cells...
• ...and lymph is found in the lymphatic vessels.

3 a Name the plasma protein [blood protein] that helps blood clot. [1 mark]
Fibrinogen.

b Describe two other types of plasma proteins. [4 marks: 2×2]
2 marks for each description. 1 mark for a basic statement or 2 marks for a more detailed answer that demonstrates understanding.
• Albumins are the main contributors to the thickness, or viscosity, of plasma and to osmotic pressure. This pressure retains fluid within blood vessels – it is the opposite force to hydrostatic pressure. If plasma proteins levels fall, the osmotic pressure also falls and fluid leaking from the bloodstream can accumulate in the tissues, causing a condition called oedema.
• Globulins include the immunoglobulins/antibodies; these are protective proteins essential for the body’s immune response. They are made by the lymphocytes [white blood cells].

Cardiovascular malfunctions
1 Would the blood pressure measurement shown in Figure 4.8 be considered to be low, normal or high? Give a reason for your answer. [2 marks]
1 mark for:
• The measurement shows a high blood pressure.
1 mark for the reason:
• High blood pressure is considered to be 140/90mmHg or higher – this measurement is in the high range as it is 143/91.
2 Describe the impact on an individual of having hypertension. [8 marks]

This is a Levels of Response Question (LOR).

Marks are awarded for the quality of the description:
- Level 1: A basic description (1–3 marks)
- Level 2: A sound description (4–6 marks)
- Level 3: A detailed description (7–8 marks)

Answers could include descriptions of:
- Impact on lifestyle: Changes in diet – a balanced diet with low fat and salt; take regular exercise; reduce alcohol intake; stop smoking; get enough sleep (at least 6 hours a night); reduce stress.
- Having to take medication: Doctors may recommend taking one or more medicines to keep blood pressure under control; these are usually taken once a day, for example ACE inhibitors, beta-blockers. These have possible side-effects and you always have to remember to take them.
- Emotional impact of knowing you have an illness and the worry about it getting worse.

3 Identify three lifestyle changes that might be needed for someone who has been diagnosed with angina. [3 marks]

1 mark each. Any three from:
- Change diet – balanced diet with low fat and salt.
- Take regular exercise.
- Reduce alcohol intake.
- Stop smoking.
- Get enough sleep – at least 6 hours a night.
- Reduce stress.

4 Describe three possible treatments for someone who has had a heart attack. [6 marks: 3×2]

1 mark for naming the treatment and 1 mark for description. Three required.

Medication:
- Cholesterol-lowering medicines, such as statins.
- Antiplatelet medicines, such as aspirin or clopidogrel, and anticoagulant medicines make the blood less likely to form clots. They also reduce the risk of having a heart attack.
- ACE inhibitors lower blood pressure and are used if someone has had a heart attack.

Surgical procedures:
- Angioplasty passes a tiny deflated balloon into a narrow artery and then inflates it, pushing the artery open, or a stent where a mesh tube is inserted to treat narrow arteries.
- A coronary artery bypass graft is surgery to bypass the narrow coronary arteries to improve the flow of blood to the heart.

L02 The respiratory system, malfunctions and their impact on individuals

Structure of the respiratory system

1 Why is tracheal cartilage ‘C’-shaped? [1 mark]

1 mark. Any one from:
- Because the oesophagus needs to expand during swallowing.
- The rings are ‘C’-shaped in the trachea with the gap at the back to allow food to travel down the oesophagus.
- The oesophagus needs to stretch as food passes down.

2 What is the role of the intercostal muscles and the diaphragm during inspiration? [2 marks]

1 mark for a basic statement or 2 marks for a more detailed answer that demonstrates understanding.

When breathing in air (inspiration):
- The intercostal muscles pull the ribcage upwards and outwards.
- The diaphragm flattens inwards.
- The result of these two movements is an increase in volume and decrease in pressure, which forces air into the lungs so that they inflate.

3 Describe the role of the intercostal muscles and the diaphragm during expiration. [2 marks]

1 mark for a basic statement or 2 marks for a more detailed answer that demonstrates understanding.

When breathing out air (expiration):
- The reverse of inspiration happens.
- The diaphragm lifts back into a dome shape.
- The intercostal muscles pull the ribcage inwards and downwards.
- These two movements force carbon dioxide out of the lungs and they deflate.

4 What are pleural membranes? [2 marks]

1 mark each:
- The pleural membranes consist of two layers of thin membrane.
- They are moist and slippery, having a thin film of liquid between the two layers.

5 What is the function of plural membranes? [2 marks]

1 mark for a basic statement or 2 marks for a more detailed answer that demonstrates understanding.

The pleural membranes have a lubricated surface so that the two pleural layers will slide over each other, allowing the lungs to move easily within the chest cavity. This means that
they move with the chest wall as breathing occurs.

Gaseous exchange

1. What does the term ‘gaseous exchange’ mean? [2 marks]
   1 mark for a basic statement or 2 marks for a more detailed answer that demonstrates understanding.
   Gaseous exchange is a process that involves the exchange of oxygen and carbon dioxide between capillaries and alveoli.

2. Explain how the structure of the alveoli wall enables efficient gaseous exchange. [6 marks]
   This is a Levels of Response Question (LOR). Marks are awarded for the quality of the explanation:
   • Level 1: A basic explanation (1–2 marks)
   • Level 2: A sound explanation (3–4 marks)
   • Level 3: A detailed explanation (5–6 marks)
   Explanations could include:
   • At the end of the tiniest bronchioles are the microscopic alveoli.
   • They are arranged in clusters in the lungs.
   • The walls of the alveoli are very thin (one cell thick).
   • Each alveoli is surrounded by capillaries, through which gases are exchanged.
   • The structure of alveoli is like bunches of grapes, which increases their surface area.
   • This structure allows the maximum crossover, or diffusion, of the gases.

3. Describe the process of gaseous exchange. [6 marks]
   This is a Levels of Response Question (LOR). Marks are awarded for the quality of the description:
   • Level 1: A basic description (1–2 marks)
   • Level 2: A sound description (3–4 marks)
   • Level 3: A detailed description (5–6 marks)
   Descriptions could include:
   • Gaseous exchange is a process that involves the exchange of oxygen and carbon dioxide between capillaries and alveoli.
   • The exchange of oxygen and carbon dioxide takes place in the alveoli.
   • Diffusion allows the oxygen to move out of the alveoli to the capillaries.
   • Oxygen moves into the bloodstream.
   • The carbon dioxide moves out of the capillaries into the alveoli and to the lungs to be exhaled.

Cellular respiration

1. What is the meaning of the phrase ‘cellular respiration’? [4 marks]
   4 marks for a definition. 1–2 marks for a basic statement or 3–4 marks for a more detailed answer that demonstrates understanding.
   Cellular respiration is a complex set of chemical reactions and processes that take place in the mitochondria to convert biochemical energy from nutrients into adenosine triphosphate (ATP), and then to release waste products.

2. What do the initials ATP stand for and what is ATP? [3 marks]
   1 mark:
   • ATP = Adenosine triphosphate.
   Up to 2 marks for what ATP is:
   • It is a high-energy molecule found in every cell.
   • Its job is to store and supply the cell with energy it needs. It is sometimes called the energy currency of the body.

3. Name the two types of cellular respiration and state two differences between them. [4 marks]
   1 mark for each type:
   • Aerobic respiration
   • Anaerobic respiration.
   2 marks for two differences:
   • Aerobic – uses oxygen
   • Anaerobic – does not need oxygen
   • Anaerobic produces lactic acid
   • Anaerobic does not produce carbon dioxide or water.

4. Give two similarities between the two types of cellular respiration. [2 marks]
   1 mark each:
   • ATP is produced
   • Glucose is used.

5. Name the toxic substance that builds up in muscles if oxygen is not available in anaerobic respiration. [1 mark]
   Lactic acid, lactate.

Respiratory malfunctions

1. Give two possible causes of asthma and three symptoms. [5 marks]
   1 mark each.
   Possible causes:
   • It may be genetic, as it often runs in families, and people who have allergies are at higher risk.
   • Environmental and social factors are thought to play a role in the development of asthma and allergies; these include dust, air pollution and chemicals such as chlorine in swimming pools.
   • Exposure to cigarette smoke or to smoking while in the womb.
   Symptoms:
   • Episodes of breathlessness
• Tightness of the chest
• Wheezing
• Asthma ‘attacks’ that require using an inhaler to open the airway.

2 State two causes of emphysema (COPD). [2 marks]
1 mark each:
• Smoking is the main cause of COPD and is thought to be responsible for around 90 per cent of cases.
• Occupational cause – certain types of fumes, dust and chemical exposure at work.
• Can also be a genetic tendency, but this is extremely rare.

3 Explain the biological cause of cystic fibrosis. [4 marks]
4 marks for an explanation. 1–2 marks for a basic statement or 3–4 marks for a more detailed answer that demonstrates understanding.
• The condition is present at birth due to a defect in a gene on chromosome 7 that controls the movement of salt and water in and out of the cells in the body.
• The protein that is produced by the gene causes mucus-secreting cells to make a very sticky type of mucus instead of a normal runny type.
• This, along with recurrent infections, results in a build-up of sticky mucus in the lungs and digestive system.

4 Describe two symptoms of cystic fibrosis. [4 marks: 2×2]
2 marks for each description. 1 mark for a basic statement or 2 marks for a more detailed answer that demonstrates understanding.
• Lung problems – recurring chest infections, persistent inflammation of the airways, coughing, wheezing, shortness of breath.
• Digestive system – diarrhoea, diabetes and malnutrition because the body struggles to digest and absorb nutrients; jaundice.
• May have a serious bowel obstruction in the first few days of life (meconium ileus) that requires an operation to remove the blockage.

Respiratory malfunctions: monitoring, treatment and care needs

1 State how asthma is monitored with a peak flow meter. [2 marks]
1 mark for each point. Two from:
• It measures the rate of exhalation.
• Measurements are taken regularly over time.
• Measurements are compared with norms.
• Measurements indicate the degree of dilation/constriction of airways.

2 Explain how different types of inhalers can help treat the symptoms of asthma. [6 marks]
This is a Levels of Response Question (LOR). Marks are awarded for the quality of the explanation:
• Level 1: A basic explanation (1–2 marks)
• Level 2: A sound explanation (3–4 marks)
• Level 3: A detailed explanation (5–6 marks)
Explanations could include:
• Preventative inhalers – used regularly, reduce inflammation and sensitivity of airways.
• Reliever inhalers – muscle relaxants for immediate relief of symptoms.
• Both types of inhaler may be used with a spacer device – gets drugs deeper.
• Nebulisers may be required if constriction is too great – get drugs deeper into the lungs.

3 Describe four lifestyle impacts of having emphysema. [4 marks]
1 mark each. Any four from:
• Stopping smoking.
• Changing diet – well balanced, to promote maintenance of healthy weight.
• Taking dietary supplements.
• Avoiding pollution and infections.
• Lacking energy and becoming breathless on any activity.
• May become immobile.
• May need to use a wheelchair.
• Needing to move to a one-storey house or install a stair lift as cannot walk up stairs.
• Having to move around with an oxygen cylinder to assist breathing.
• Requiring home help for daily living tasks.
• The emotional and social impacts of not being able to complete daily living tasks or go out socially without an oxygen tank, for example, may lead to depression, anxiety and stress.

4 Explain how spirometry is used to monitor lung conditions. [6 marks]
This is a Levels of Response Question (LOR). Marks are awarded for the quality of the explanation:
• Level 1: A basic explanation (1–2 marks)
• Level 2: A sound explanation (3–4 marks)
• Level 3: A detailed explanation (5–6 marks)
Explanations could include:
• Spirometry is a test carried out to measure the breathing capacity of the lungs.
• It measures the volume of air expired [breathed out] in total and the force of the expiration in the first second of breathing out.
• It is used to diagnose and monitor a range of lung conditions, such as asthma, COPD and cystic fibrosis.
• The individual has a clip placed on their nose and has to blow into a mouthpiece having inhaled, and then repeat this at least three times.
• The test lasts around 30–90 minutes.
5 How can medication help someone with cystic fibrosis? [2 marks]
1 mark each:
• Antibiotics to treat infections
• Corticosteroids, steroid treatments to relieve symptoms
• Anti-inflammatory medication to reduce swelling and inflammation.

2 What feature of the villi enables absorption to take place efficiently? [2 marks]
1 mark for a basic statement or 2 marks for a more detailed answer that demonstrates understanding.
Villi are finger-like projections that increase the surface area of the small intestine wall to enable efficient absorption.

3 Describe assimilation. [2 marks]
1 mark for a basic statement or 2 marks for a more detailed answer that demonstrates understanding.
• Assimilation is the movement of digested food molecules into the cells of the body where they are used, so that they become part of those cells.
• Excess glucose in the blood reaching the liver is converted into glycogen to be stored or broken down through respiration, producing energy.
• The liver is where toxins such as alcohol are broken down.

4 a Explain the digestive role of pancreatic juice. [3 marks]
1 mark for a basic statement or 2–3 marks for a more detailed answer that demonstrates knowledge and understanding.
• The pancreas produces digestive enzymes that are released into the small intestine in pancreatic juice.
• The pancreatic juices that are released into the duodenum help the body digest fats.
• The pancreatic juices are released into a system of ducts that culminate in the main pancreatic duct.

b Explain the digestive role of bile. [3 marks]
1 mark for a basic statement or 2–3 marks for a more detailed answer that demonstrates knowledge and understanding.
• Bile is a digestive juice produced by the liver.
• It helps the body absorb fat into the bloodstream.
• It is stored in the gallbladder until the body needs it to digest fats.
• It enters the small intestine through the bile duct.
• Bile emulsifies fats and neutralises stomach acid.
Digestive malfunctions: possible causes and effects on the individual

1. Give two possible causes of IBS and two symptoms. [4 marks: 2+2]
   1 mark each for two causes and 1 mark each for two symptoms.
   Possible causes:
   - IBS is believed to be linked to an increased sensitivity of the gut to certain foods. It is also thought to be related to problems with digesting food.
   - In many people the symptoms seem to be triggered by something they have eaten or drunk. Changes in diet and lifestyle can be important in managing and controlling the condition.
   Symptoms:
   - Stomach pain and cramping.
   - Changes in bowel habits, such as diarrhoea or constipation, or both.
   - Bloating and swelling of the stomach.
   - Excessive wind, known as flatulence.
   - Sudden need to go to the toilet.
   - Feeling that the bowels have not fully emptied after going to the toilet.
   - Mucus passing from the anus.

2. Explain the damage done to the villi by coeliac disease. [6 marks]
   This is a Levels of Response Question (LOR). Marks are awarded for the quality of the explanation:
   - Level 1: A basic explanation (1–2 marks)
   - Level 2: A sound explanation (3–4 marks)
   - Level 3: A detailed explanation (5–6 marks)
   Explanations could include:
   - The immune system mistakes gliadin, a substance found in gluten, as a threat to the body and so attacks it.
   - This causes damage to the villi (tiny projections lining the small intestine).
   - The antibodies cause the surface of the intestine to become inflamed.
   - The villi are flattened, meaning the body’s ability to absorb nutrients is disrupted.

3. Give two possible causes and two symptoms of gallstones. [4 marks: 2+2]
   1 mark each for two causes and 1 mark each for two symptoms.
   Causes:
   - Gallstones are thought to be caused by an imbalance in the chemical make-up of bile inside the gallbladder.
   - Gallstones are more common if an individual is overweight or obese, is aged over 40 years, has a condition that affects the flow of bile (such as cirrhosis of the liver, Crohn’s disease or IBS) or has a close family member who has also had gallstones.
   Symptoms:
   - Abdominal pain, which can be sudden and severe
   - Excessive sweating, feeling sick or vomiting
   - Jaundice – yellowing of the skin and whites of the eyes
   - Itchy skin, diarrhoea
   - Loss of appetite.

4. Explain the biological cause of gallstones. [6 marks]
   This is a Levels of Response Question (LOR). Marks are awarded for the quality of the explanation:
   - Level 1: A basic explanation (1–2 marks)
   - Level 2: A sound explanation (3–4 marks)
   - Level 3: A detailed explanation (5–6 marks)
   Explanations could include:
   - Gallstones can form if:
     - there are unusually high levels of cholesterol inside the gallbladder
     - there are unusually high levels of a waste product called bilirubin inside the gallbladder.
   - These chemical imbalances cause tiny crystals to develop in the bile. These can gradually grow (often over many years) into solid stones that can be as small as a grain of sand or as large as a pebble. Sometimes only one stone will form, but often several develop at the same time.

Digestive malfunctions: monitoring, treatment and care needs

1. How is an endoscope used to investigate symptoms of dietary malfunctions? [4 marks]
   4 marks for an explanation. 1–2 marks for a basic statement or 3–4 marks for a more detailed answer that demonstrates knowledge and understanding.
   Explanations could include:
   - The procedure uses a long, flexible tube called an endoscope.
   - The tube has a light and a video camera at one end.
   - The endoscope is inserted into the body through a natural opening such as the mouth or anus.
   - It can be uncomfortable so a local anaesthetic spray is used to numb the throat.
   - It takes around an hour to carry out. It is used to investigate symptoms such as difficulty swallowing and persistent abdominal pain.

2. Identify two treatments for coeliac disease. [2 marks]
1 mark each. Two from:
- The individual must give up all foods containing gluten for life to avoid long-term damage to health.
- Vaccinations, e.g. flu jab, as individuals with coeliac disease are more vulnerable to infection.
- Taking vitamin and mineral supplements can also help correct any dietary deficiencies.

Now test yourself answers
Cambridge Technicals Level 3 Health and Social Care

3 Explain possible treatments for gallstones. [8 marks]
This is a Levels of Response Question (LOR).
Marks are awarded for the quality of the explanation:
- Level 1: A basic explanation (1–3 marks)
- Level 2: A sound explanation (4–6 marks)
- Level 3: A detailed explanation (7–8 marks)
Answers could include explanations of:
- Treatment depends on how the symptoms are affecting the individual’s daily life.
- For someone who doesn’t have any symptoms, a policy of ‘active monitoring’ is often recommended. This means the individual does not receive immediate treatment but they should let their GP know if they notice any symptoms because if the gallstones start to block the gallbladder they will cause pain and nausea and treatment will be needed.
- If it becomes necessary to remove the gallbladder this is usually done by keyhole surgery.
- It is possible to take tablets to dissolve small gallstones. These are not prescribed very often, however, because:
  - they are not always that effective
  - they need to be taken for a long time – up to two years
  - gallstones can recur once treatment is stopped.
- Lithotripsy is a non-surgical treatment where a tiny endoscope probe is used to deliver shock waves that shatter the gallstones. The camera on the endoscope allows the surgeon to see the gallstones shattering.

4 Describe the social impact on an individual with IBS. [6 marks]
This is a Levels of Response Question (LOR).
Marks are awarded for the quality of the description:
- Level 1: A basic description (1–2 marks)
- Level 2: A sound description (3–4 marks)
- Level 3: A detailed description (5–6 marks)
Answers could include descriptions of:
- The need to visit the toilet may restrict trips out and socialising.
- Flatulence may be embarrassing and reduce confidence when socialising with others.
- Can restrict diet and may make socialising difficult and embarrassing as the individual may not be able to eat or drink the same as friends.
- May need to avoid stressful situations – this is not always easy.

5 Describe the dietary impact on an individual of being diagnosed with coeliac disease. [6 marks]
This is a Levels of Response Question (LOR). Marks are awarded for the quality of the description:
- Level 1: A basic description (1–2 marks)
- Level 2: A sound description (3–4 marks)
- Level 3: A detailed description (5–6 marks)
Answers could include descriptions of:
- Remove gluten from diet by excluding wheat products, otherwise villi will be damaged.
- Take additional vitamin and mineral supplements – may be a deficiency until villi regrow, due to impaired absorption.
- Read food labels very carefully when shopping as flour is often used as a thickening agent.
- Take care when eating out – look for gluten-free products. Most items on menus are likely to contain gluten.
- Take care when eating at the homes of family and friends [as above].
- Avoid using oil that has been used to fry gluten – may be traces of products containing gluten, e.g. batter.

L04 The musculoskeletal system, malfunctions and their impact on individuals

Structure of bone
1 Name five different types of joint and state their location. [10 marks: 5×2]
1 mark each:
- Ball and socket: Hip, shoulder
- Pivot: Neck
- Hinge: Elbow, knee
- Sliding: Wrist, ankle
- Fixed: Cranium, pelvis.

2 What is the difference between a ligament and tendon? [2 marks]
1 mark each:
- A ligament attaches one bone to another bone.
- A tendon attaches a muscle to a bone.

3 What is the purpose of synovial fluid? [2 marks]
1 mark each:
- To lubricate the joint.
- To nourish the joint.
4 Why do muscles have to work in pairs to create movement? [2 marks]

1 mark for a basic statement or 2 marks for a more detailed answer that demonstrates understanding.

Muscles have to work in pairs to bring about opposite actions. This is because they can only ‘pull’ when they contract. They cannot ‘push’.

Musculoskeletal malfunctions: possible causes and effects on the individual

1 Explain the biological cause of osteoporosis. [2 marks]

1 mark for a basic statement or 2 marks for a more detailed answer that demonstrates understanding.

Osteoporosis is due to loss of protein matrix from the bone, resulting in a loss of bone density, a condition that weakens bones, causing them to become brittle. This is because the hormone oestrogen (which promotes bone formation) declines after the menopause.

2 Give two symptoms of rheumatoid arthritis. [2 marks]

1 mark each. Two from:
- Throbbing pain and aching
- Stiff joints
- Joints can swell and become hot and tender to touch
- Firm swellings called rheumatoid nodules can also develop under the skin around affected joints.

3 Why is osteoarthritis sometimes called ‘wear and tear’ arthritis? [3 marks]

1 mark for a basic statement or 2–3 marks for a more detailed answer that demonstrates understanding.

- Cartilage is worn thin in the joint and loses elasticity.
- General wear and tear of the joints is usually repaired by the body unnoticed. With osteoarthritis the cartilage can be lost, bony growths develop and the area can become inflamed.

4 State three symptoms of osteoarthritis. [3 marks]

1 mark each. Three from:
- The joints become painful and stiff, most often in the knees, hips and small joints of the hands.
- There is joint tenderness and increased pain if the joint has not moved in a while.
- There can be a cracking noise or grating sensation of the joint.
- There can be limited range of movement in the joint.
- Joints can appear more ‘knobbly’ than usual.

Musculoskeletal malfunctions: monitoring, treatment and care needs

1 Describe three different treatments for arthritis: give one medication, one physical treatment and one surgical treatment. [6 marks: 3×2]

1 mark for each treatment and 1 mark for each description.

Medication:
- Steroids and NSAIDs (non-steroidal anti-inflammatory drugs) to reduce swelling and inflammation of joints.
- Painkillers, for example paracetamol.
- Corticosteroid injections into the joint to reduce swelling.
- Supplements such as glucosamine and chondroitin to alleviate symptoms.

Physiotherapy and exercise:
- Joint manipulation, e.g. physiotherapy, to strengthen muscles around joints and to keep joints flexible and maintain mobility.
- Assistance equipment, such as walking sticks, which take some of the weight off the joint, or a splint to support a joint.
- Use of TENS, a device that gives small electrical impulses and can reduce pain.

Surgery:
- Arthroscopy to clean debris in joint.
- Arthroplasty – joint replacement, for example a knee replacement to renew an affected joint.
- Osteotomy, where a bone is cut and re-aligned.

2 State two methods that could be used to monitor osteoporosis. [2 marks]

1 mark each. Two from:

Possible methods of monitoring:
- Bone density scans (DEXA scan)
- Blood tests
- Fracture of an unusual bone, for example the wrist, shoulder, vertebrae.

3 Give three different possible treatments for osteoporosis. [3 marks]

Treatments could include:
- Taking calcium and vitamin D supplements.
- Carrying out load-bearing exercise.
- Taking HRT (hormone replacement therapy) – the hormones oestrogen and/or progesterone prescribed for post-menopausal women.
- Taking bisphosphonates, which slow the rate at which bone is broken down in the body so as to maintain bone density and reduce the
risk of fracture. They are given as an injection or in tablet form, and can have side-effects.

- Taking medication for strengthening bones.
- Having physiotherapy.
- Using TENS.

4 Explain effects that a musculoskeletal condition can have on an individual’s ability to carry out activities of daily living. [8 marks]

This is a Levels of Response Question [LOR].

Marks are awarded for the quality of the explanation:

- Level 1: A basic explanation (1–3 marks)
- Level 2: A sound explanation (4–6 marks)
- Level 3: A detailed explanation (7–8 marks)

Answers could include explanations of:

- Medication may have side-effects.
- Attending regular check-ups and monitoring appointments.
- Healthy eating, dietary changes.
- Regular exercise, being physically active.
- Taking care to avoid fractures – affects what you do: hobbies, gardening, lifting things, ability to exercise, etc.
- Loss of height – leads to back pain, hunched appearance.
- Coping with pain – lack of sleep leading to tiredness and lack of concentration, and emotional and social effects.
- May become immobile, housebound, need a single-storey house.
- May need to use a wheelchair or walking aids.
- Recovery from surgery.
- Home adaptions – stair lift, hand rails and grab handles, lever taps to make them easier to turn.
- Arthritis can make preparing meals, shopping, driving, etc., difficult or impossible.

LO5 The control and regulatory systems, malfunctions and their impact on individuals

Components of the nervous system

1 Describe the structure and purpose of the myelin sheath. [4 marks]
4 marks for a description. 1–2 marks for a basic statement or 3–4 marks for a more detailed answer that demonstrates understanding.

- It is a fatty white substance that surrounds the axon.
- It forms a protective, insulating layer.
- It enables electrical impulses to transmit quickly and efficiently along the nerve cells.
- They are part of the neuron.
- They receive electrical impulses and carry them towards the cell body.
- There can be as many as 1000 per neuron.

3 What is a neurotransmitter? [2 marks]
1 mark for a basic statement or 2 marks for a more detailed answer that demonstrates understanding.

Any two from:

- Chemical messengers...
- ...released from the nerve-ending of a neuron...
- ...diffuse across the synapse (the gap) and transmit signals.

Organisation and function of the endocrine system

1 Name four glands and the hormones they secrete. [8 marks: 4×2]
1 mark for each gland and 1 mark for its hormone.

- Pancreas: Insulin
- Adrenal: Adrenaline
- Thyroid: Thyroxine
- Ovaries and testes: Testosterone and oestrogen/progesterone.

2 Describe the structure of the kidney, naming the main components. [16 marks: 8×2]
1 mark for each component and 1 mark for its description.

- Cortex: The outer layer of the kidney.
- Medulla: The inner region, contains thousands of nephrons.
- Renal artery: Supplies kidney with blood.
- Renal vein: Carries blood filtered by the kidney.
- Calyx: Chambers through which urine passes.
- Ureters: Tubes that carry urine from the kidney to the bladder.
- Bladder: Stores urine.
- Urethra: Urine passes out of the body through this.

3 Describe the functions of a nephron. [6 marks]
This is a Levels of Response Question [LOR].
Marks are awarded for the quality of the description:

- Level 1: A basic description (1–2 marks)
- Level 2: A sound description (3–4 marks)
- Level 3: A detailed description (5–6 marks)

Answers could include descriptions of:

- Ultrafiltration is when metabolic wastes are separated from the blood and urine is formed. It occurs in the glomerular capsule (Bowman’s capsule) in the nephron.
- After filtration kidneys selectively reabsorb molecules that the body needs. These
include: glucose; mineral ions (salts) reabsorbed in the proximal and distal tubules; as much water as the body needs, reabsorbed by the loop of Henle.

**Breakdown functions of the liver and homeostasis**

1. State one example for each of the following liver functions: deamination, detoxification and production of bile. [3 marks]
   1 mark each. Any three, one from each function.
   - **Deamination:**
     - Deamination occurs in the liver during protein metabolism (breakdown).
     - It results in the production of ammonia, which is toxic waste.
   - **Detoxification:**
     - The liver converts the ammonia produced by deamination into urea; this is still waste, but is less toxic.
     - The urea is transported in the blood and removed by the kidney in the urine.
     - The liver breaks down alcohol, removing it from the blood.
     - It also breaks down drugs such as paracetamol.
   - **Production of bile:**
     - Bile is produced by the liver as a result of the breakdown of red blood cells.
     - Bile is stored in the gallbladder until needed by the digestive system.
     - Bile emulsifies fats during the digestive process.

2. Define the term ‘homeostasis’. [2 marks]
   1 mark for a basic statement or 2 marks for a more detailed answer that demonstrates understanding.
   - Homeostasis is the maintenance of a constant internal environment. The conditions in the body must be very carefully controlled if the body is to function effectively. The nervous system and hormones are responsible for this.

3. Explain what is meant by a ‘negative feedback mechanism’. [2 marks]
   1 mark for a basic statement or 2 marks for a more detailed answer that demonstrates understanding.
   - Homeostatic control is achieved by using negative feedback mechanisms.
   - If the level of something rises, the control systems reduce it again.
   - If the level of something falls, the control systems raise it again.
   - Changes are detected and corrective mechanisms are activated.

4. List the stages in the negative feedback cycle. [5 marks]
   - **Stages:**
     - Conditions in the body change from set point.
     - Change is detected.
     - Corrective mechanisms are activated.
     - Conditions are returned to set point.
     - Corrective mechanisms are switched off.

**Malfunctions of control and regulatory systems**

1. Describe the possible effects of a stroke. [6 marks]
   This is a Levels of Response Question (LOR). Marks are awarded for the quality of the description:
   - Level 1: A basic description (1–2 marks)
   - Level 2: A sound description (3–4 marks)
   - Level 3: A detailed description (5–6 marks)
   Answers could include descriptions of:
   - **Face:** The face may have dropped on one side.
   - **Arms:** The person with suspected stroke may not be able to lift both arms and keep them there.
   - **Speech:** The person’s speech may be slurred or garbled, or they may not be able to talk at all.
   - **Other symptoms:** Dizziness, confusion, problems with balance and co-ordination, difficulty swallowing, a sudden and very severe headache resulting in blinding pain.

2. How would someone who has diabetes monitor their blood glucose level? [2 marks]
   1 mark for a basic statement or 2 marks for a more detailed answer that demonstrates understanding.
   - • By pricking their finger or wearing a device that continuously tests interstitial fluid.
   - Done multiple times daily in Type 1 and usually less often in Type 2.

3. Give a biological cause of nephrotic syndrome. [4 marks]
   4 marks for an explanation. 1–2 marks for a basic statement or 3–4 marks for a more detailed answer that demonstrates understanding.
   - The kidneys do not work properly, causing large amounts of protein to leak into the urine.
   - Loss of protein through the kidneys (proteinuria) is due to an increase in permeability of the filtering membrane of the kidney (the glomerulus) due to kidney disease (glomerulonephritis).
   - This leads to low protein levels in the blood (hypoaalbuminemia), which causes water to be drawn into the soft tissues, resulting in oedema.
4 How is nephrotic syndrome monitored? [2 marks]
1 mark for each point, two required.
• Urine needs to be monitored daily...
• ...using a dipstick to check for relapses.
• Records need to be kept to track levels.

5 Explain the care needs of someone with multiple sclerosis. [8 marks]
This is a Levels of Response Question (LOR).
Marks are awarded for the quality of the explanation:
• Level 1: A basic explanation (1–3 marks)
• Level 2: A sound explanation (4–6 marks)
• Level 3: A detailed explanation (7–8 marks)
Answers could include explanations of:
• May need to use a wheelchair.
• May need daily care within a couple of years if symptoms and effects get steadily worse.
• There is no cure, so the need is to treat symptoms.
• Steroid medication used to treat relapses.
• Support from a specialist MS team, including: MS nurse, physiotherapist, speech and language specialist, and neurology specialist.

6 Describe the cause of cirrhosis of the liver. [4 marks]
4 marks for a description. 1–2 mark for a basic statement or 3–4 marks for a more detailed answer that demonstrates understanding.
• Alcohol misuse – regularly drinking large amounts of alcohol in a short time or drinking more than the recommended limits over many years.
• A long-term infection with hepatitis C.
• Obesity is a cause of non-alcoholic fatty liver disease.

LO6 The sensory systems, malfunctions and their impact on individuals

The structure of the eye and ear

1 What is the function of the a) iris, b) macula, c) lens? [3 marks]
1 mark each:
• Iris: The visible coloured ring at the front of the eye. It adjusts to control the amount of light entering the eye through the pupil.
• Macula: Has a very high concentration of photoreceptor cells that detect light and send signals to the brain, which interprets them as images.
• Lens: Focuses light entering the eye.

2 Describe the function of the tear glands. [2 marks]
1 mark for a basic statement or 2 marks for a more detailed answer that demonstrates understanding.
• They produce tears to clean the front of the eye.
• They produce tears that lubricate the front of the eye.
• The fluid contains salt and has natural antiseptic properties to defend against infection.

3 Describe the structure and state the function of the eardrum. [2 marks]
1 mark each:
• Structure: A thin layer of tissue that receives sound vibrations.
• Function: Transmits sound vibrations to the middle ear cavity.

4 What is the purpose of the semi-circular canals and ampullae? [3 marks]
1 mark each:
• Help you keep your balance.
• Movements of cilia communicated to the brain.
• Work as a type of motion sensor.

Malfunctions of the eye and ear:
possible causes and effects on the individual

1 What is the biological cause of glaucoma? [3 marks]
1 mark for a basic statement or 2–3 marks for a more detailed answer that demonstrates understanding.
• It is caused by a build-up of pressure in the eye.
• Fluid from the aqueous humour is unable to drain properly.
• This increase in pressure damages the optic nerve.

2 Give four examples of how AMD can affect vision. [4 marks]
1 mark each. Any four from:
• Can make everyday activities like reading and recognising faces difficult as there is gradual loss of central vision.
• Without treatment, vision may get worse. This can happen gradually over several years (dry AMD), or quickly over a few weeks or months (wet AMD).
• Seeing straight lines as wavy or crooked.
• Objects looking smaller than normal.
• Colours seeming less bright than they used to.
• Seeing things that aren’t there (hallucinations).
3 How does a lens change when affected by cataracts? [1 mark]
Cloudy patches develop in the lens.

4 Describe the cause of retinopathy. [6 marks]
This is a Levels of Response Question (LOR).
Marks are awarded for the quality of the description:
- Level 1: A basic description (1–2 marks)
- Level 2: A sound description (3–4 marks)
- Level 3: A detailed description (5–6 marks)

Descriptions could include:
- Retinopathy is a complication of diabetes.
- Caused by high blood-sugar levels damaging the retina.
- Even in well-controlled diabetes, over time high blood-sugar levels cause blood vessels to narrow and leak.
- This causes abnormal blood flow to the retina.
- This damages the cells in the retina, leading to vision loss.

5 State four causes of deafness. [4 marks]
1 mark each. Any four from:
Gradual hearing loss can be due to:
- ageing
- exposure to loud noises over many years.

Conductive hearing loss can be due to:
- a blockage such as earwax
- an infection, which can cause a build-up of fluid
- a perforated ear drum.

Sensorineural hearing loss is caused by:
- damage to the hair cells in the inner ear
- damage to the auditory nerve
- viral infections, such as measles, mumps and meningitis
- damage to the inner ear caused by a blow to the head or exposure to a very loud noise such as an explosion.

6 Explain possible impacts on lifestyle for someone who works and is diagnosed with hearing loss. [8 marks]
This is a Levels of Response Question (LOR).
Marks are awarded for the quality of the explanation:
- Level 1: A basic explanation (1–3 marks)
- Level 2: A sound explanation (4–6 marks)
- Level 3: A detailed explanation (7–8 marks)

Answers could include explanations of:
- May meet new people and make new friends, for example through Action on Hearing Loss, who can provide support to manage the condition and its impacts.
- Different ways of communicating may have to be learned, such as sign language or lip reading.
• Attending regular check-ups and monitoring appointments.
• Recovery from surgery if given an implant.
• May become housebound if hearing is totally lost – may not want to socialise because of not being able to hear conversations.
• Home adaptions – visual alarms, telephone, CCTV camera entry.
• Loss of independence – wanting to be with someone when leaving the house.

• May have to change job, may need adaptations in the workplace.
• Feeling tired or stressed from having to concentrate hard while listening if hearing is poor.
• Emotional and social effects – depression, not going out socially or taking part in hobbies and sport.