



Rewarding Learning

**ADVANCED SUBSIDIARY (AS)
General Certificate of Education
2022**

**Sports Science and the
Active Leisure Industry**

Unit AS 2

The Active Leisure Industry:
Health, Fitness and Lifestyle

[SAL21]

WEDNESDAY 25 MAY, AFTERNOON

**MARK
SCHEME**

Foreword

Introduction

Mark Schemes are published to assist teachers and students in the preparation for examinations. Through the mark schemes teachers and students will be able to see what examiners are looking for in response to questions and exactly where the marks have been awarded. The publishing of the mark schemes may help to show that examiners are not concerned about finding out what a student does not know but rather with rewarding students for what they do know.

The Purpose of Mark Schemes

Examination papers are set and revised by teams of examiners and revisers appointed by the Council. The teams of examiners and revisers include experienced teachers who are familiar with the level and standards expected of 16- to 18-year-old students in schools and colleges. The job of the examiners is to set the questions and the mark schemes; and the job of the revisers is to review the questions and mark schemes commenting on a large range of issues about which they must be satisfied before the question papers and mark schemes are finalised.

The questions and mark schemes are developed in association with each other so that the issues of differentiation and positive achievement can be addressed right from the start. Mark schemes therefore are regarded as a part of an integral process which begins with the setting of questions and ends with the marking of the examination.

The main purpose of the mark scheme is to provide a uniform basis for the marking process so that all markers are following exactly the same instructions and making the same judgements in so far as this is possible. Before marking begins a standardising meeting is held where all the markers are briefed using the mark scheme and samples of the students' work in the form of scripts. Consideration is also given at this stage to any comments on the operational papers received from teachers and their organisations. During this meeting, and up to and including the end of the marking, there is provision for amendments to be made to the mark scheme. What is published represents this final form of the mark scheme.

It is important to recognise that in some cases there may well be other correct responses which are equally acceptable to those published: the mark scheme can only cover those responses which emerged in the examination. There may also be instances where certain judgements may have to be left to the experience of the examiner, for example, where there is no absolute correct response – all teachers will be familiar with making such judgements.

The Council hopes that the mark schemes will be viewed and used in a constructive way as a further support to the teaching and learning processes.

General Marking Instructions

Introduction

Mark schemes are intended to ensure that the GCE examinations are marked consistently and fairly. The mark schemes provide markers with an indication of the nature and range of candidates' responses likely to be worthy of credit. They also set out the criteria which they should apply in allocating marks to candidates' responses.

Assessment objectives

Below are the assessment objectives for GCE Sports Science and the Active Leisure Industry.

Candidates must:

demonstrate knowledge and understanding of sports science and the active leisure industry (AO1);
apply knowledge, understanding and skills through different contexts appropriate to the sports science and the active leisure industry (AO2); and
analyse and evaluate evidence to make reasoned and valid judgements about sports science and the active leisure industry (AO3).

Quality of candidates' responses

In marking the examination papers, examiners should be looking for a quality of response reflecting the level of maturity which may reasonably be expected of a 17-year-old or 18-year-old which is the age at which the majority of candidates sit their GCE examinations.

Flexibility in marking

Mark schemes are not intended to be totally prescriptive. No mark scheme can cover all the responses which candidates may produce. In the event of unanticipated answers, examiners are expected to use their professional judgement to assess the validity of answers. If an answer is particularly problematic, then examiners should seek the guidance of the Supervising Examiner.

Positive marking

Examiners are encouraged to be positive in their marking, giving appropriate credit for what candidates know, understand and can do rather than penalising candidates for errors or omissions. Examiners should make use of the whole of the available mark range for any particular question and be prepared to award full marks for a response which is as good as might reasonably be expected of a 17-year-old or 18-year-old GCE candidate.

Awarding zero marks

Marks should only be awarded for valid responses and no marks should be awarded for an answer which is completely incorrect or inappropriate.

Types of mark schemes

Mark schemes for tasks or questions which require candidates to respond in extended written form are marked on the basis of levels of response which take account of the quality of written communication. Other questions which require only short answers are marked on a point for point basis with marks awarded for each valid piece of information provided.

Levels of response

Tasks and questions requiring candidates to respond in extended writing are marked in terms of levels of response. In deciding which level of response to award, examiners should look for 'best fit' bearing in mind that weakness in one area may be compensated by strength in another. In deciding which mark within a particular level to award to any response, examiners are expected to use their professional judgement.

Quality of written communication

Quality of written communication is taken into account in assessing candidates' responses to all tasks and questions that require them to respond in extended written form. These tasks and questions are marked on the basis of levels of response. The description for each level of response includes reference to the quality of written communication.

For conciseness, quality of written communication is distinguished within levels of response. An example follows:

Level 1: Quality of written communication is basic.

Level 2: Quality of written communication is good.

Level 3: Quality of written communication is excellent.

In interpreting these level descriptions, an example is provided below. Examiners should refer to the specific guidance given within the mark scheme for each question:

Band 1 (Basic): The candidate makes only a limited selection and use of an appropriate form and style of writing. The organisation of material will lack clarity and coherence. There is little use of appropriate specialist vocabulary. Presentation, spelling, punctuation and grammar may be such that intended meaning is not clear.

Band 2 (Good): The candidate makes a reasonable selection and use of an appropriate form and style of writing. Relevant material is organised with clarity and coherence. There is some use of appropriate specialist vocabulary. Presentation, spelling, punctuation and grammar are sufficiently competent to make meaning clear.

Band 3 (Excellent): The candidate successfully selects and uses the most appropriate form and style of writing. Relevant material is organised with a high degree of clarity and coherence. There is widespread and accurate use of appropriate specialist vocabulary. Presentation, spelling, punctuation and grammar are of a sufficiently high standard to make meaning clear.

COVID-19 Context

Given the unprecedented circumstances presented by the COVID-19 public health crisis, senior examiners, under the instruction of CCEA awarding organisation, are required to train assistant examiners to apply the mark scheme in case of disrupted learning and lost teaching time. The interpretation and intended application of the mark scheme for this examination series will be communicated through the standardising meeting by the Chief or Principal Examiner and will be monitored through the supervision period. This paragraph will apply to examination series in 2021–2022 only.

1 (a) Answers may address some of the following points:

- Sport and Physical Recreation
- Home-based Leisure
- Arts and Entertainment
- Countryside recreation
- Catering and Hospitality
- Heritage and Visitor Attractions

All other valid points will be given credit.

Award [1] for the naming of each component.

(2 × [1])

(AO1)

[2]

(b) Answers may address some of the following points:**(i)** Public Sector:

- The government provides the money spent on sport and active leisure.
- This money is generated by taxing the general public. Ensuring that taxpayers get value for money.
- Funding is used to provide active leisure services such as Public Leisure Centres. These are managed for the good of the community. Increasing health and fitness of individuals and communities as a whole.

(ii) Private Sector:

- Active leisure and sporting facilities are funded by profit making organisations.
- Investments are made by private individuals to provide sporting and active leisure facilities.
- Commercial companies provide opportunities, facilities and services to make financial profit.
- Customers pay membership for access to services and facilities.
- Investments by shareholders to provide active leisure facilities.

Award [1] for key phrase and up to [2] for full description of funding.

All other valid points will be given credit.

(2 × [3])

(AO2)

[6]

(c) Answers may address some of the following points:

- An active lifestyle helps to relieve stress, anxiety and depression. The mind is occupied when exercising, which can act as a distraction from the problems of daily life.
- Research has shown that exercise can improve concentration, enhance memory and learning, leading to better performance and results for an individual.
- Helps the individual to feel good as endorphins/serotonin are released in the brain 'happy hormones'. This can contribute to enjoyment of life.
- Setting goals and challenges and a sense of achievement can have a positive impact on the individuals mental health and well-being.
- Improves self-esteem and feelings of self-worth, being part of a group/team.
- Aggression- channelled into sport, in a more positive controlled manner, where it can be at times a mood altering experience.
- By participating in physical activity there is an enhancement of mental health and a sense of well-being.
- Reduces feelings of fatigue, have more energy to keep going and can boost daily activities, enabling people to cope better.

- Participation in physical activity offers individuals a vehicle for responsible risk taking behaviour. This is the healthy approach to experiencing an adrenalin rush and pushing the boundaries.

Award [1] for identification of positive psychological effect and [1] for explanation of positive psychological effect.

All other valid points will be given credit.

(2 × [2])

(AO1, AO2)

[4]

(d) The quality of written communication is assessed in this question.

Answer may address some of the following points:

- Inactivity/Sedentary lifestyle – Over the past decades physical activity levels have declined. Technological advances have promoted passive leisure activities. People are leading more sedentary lives and rely on cars/buses/trains for transport over more active means such as cycling or walking.
- Poor Diet – A diet high in saturated fat, salt and simple carbohydrates can lead to individuals becoming overweight or obese.
- Lack of sleep – lack of sleep leads to fatigue and lethargy. Individual is less likely to feel motivated to be active.
- Poor work/life balance – individuals are living fast paced lifestyles. Individuals often work long hours focusing on career goals. This adds stress and creates a poor work/life balance. Individuals often have little time to build exercise into their working day.
- Poor lifestyle choices increases the threat to overall health, increases chances of developing hypokinetic diseases such as coronary heart disease, cancer, type II diabetes, which will reduce life expectancy.
- Poor diet and sedentary lifestyle leads to obesity. The World Health Organisation has estimated that obesity causes around 3 million deaths per year.
- Research in the UK has estimated the average life expectancy is 80-82 years for female and 78 for males. The leading health risk factors for the nation today, include smoking/nicotine addiction, alcohol addiction and misuse of legal and illegal substances.
- Research has shown that a lack of exercise causes as many as 1 in 10 premature deaths each year. It has also shown that poor physical fitness is directly linked to higher disease rates.
- Due to technological developments in society, people are leading more sedentary lives which is having a negative impact on their health and negatively affecting life expectancy.
- Smoking/nicotine addiction has been linked with illnesses such as: pneumonia; respiratory infections; stroke; mouth, throat and lung cancer.
- A high alcohol intake of more than 14 units a week causes long term health problems: liver disease; nerve damage; hypertension; stroke; mouth, throat and liver cancer
- Taking illegal drugs such as cocaine can cause heart problems, depression and insomnia.
- Poor physical health can cause a decline in mental health.
- An unhealthy lifestyle increases the likelihood of absenteeism from work. The individual may be less productive and performance level may drop within a work environment.
- To improve health and life expectancy the government need to encourage a healthier approach to managing lifestyle. This will have a positive impact on society and increase life expectancy and well-being.

All other valid points will be given credit.

Level 1 ([1]–[3])

Overall impression: Basic

- Basic knowledge and understanding of the impact of poor lifestyle choices on the health and life expectancy of an individual. The candidate will include basic examples.
- Demonstrates a basic ability to assess the impact of poor lifestyle choices on the health and life expectancy of an individual. Candidates will give basic examples.
- Quality of written communication is basic. The candidate makes a limited selection and use of an appropriate form and style of writing. The organisation of material may lack clarity and coherence. There is little use of specialist vocabulary. Presentation, spelling, punctuation and grammar may be such that intended meaning is not clear.

Level 2 ([4]–[6])

Overall impression: Good

- Good knowledge and understanding of the impact of poor lifestyle choices on the health and life expectancy of an individual. The candidate will provide relevant examples.
- Demonstrates a good ability to assess the impact of poor lifestyle choices on the health and life expectancy of an individual. Candidates will provide some examples.
- Quality of written communication is good. The candidate makes a reasonable selection and use of an appropriate form and style of writing. Relevant material is organised with some clarity and coherence. There is adequate use of specialist vocabulary. Presentation, spelling, punctuation and grammar are sufficiently competent to make meaning clear.

Level 3 ([7]–[8])

Overall impression: Excellent

- Excellent knowledge and understanding of the impact of poor lifestyle choices on the health and life expectancy of an individual. The candidate will provide fully developed examples and show excellent understanding.
- Demonstrates an excellent ability to assess the impact of poor lifestyle choices on the health and life expectancy of an individual. Candidates will provide thorough explanations and will use a variety of relevant examples.
- Quality of written communication is excellent. The candidate successfully selects and uses an appropriate form and style of writing. Relevant material is organised with a degree of clarity and coherence. There is an extensive and accurate use of specialist vocabulary. Presentation, spelling, punctuation and grammar are of a high standard and ensure the meaning is clear.

[0] is awarded for a response not worthy of credit.
(AO1, AO3)

[8]

20

2 (a) Answers may address some of the following points:

Speed:

- The maximum rate at which a person is able to move his/her body to cover a specific distance.
- Necessary to accelerate from the starting blocks to maximal velocity in as short a time as possible (acceleration phase).
- It is important for a sprinter to be able to perform a sprint finish to beat opponents.
- Leg speed particularly important to accelerate and maintain speed.

Strength:

- Strength is the ability to overcome a resistance.
- Maximal strength is the maximum force exerted by a specific muscle or muscle group during a single maximal muscle contraction or one repetition maximum.
- Sprinters apply strength rapidly and powerfully.
- Explosive strength is required to push out of the blocks when completing the sprint start.
- Dynamic strength is required to compete the sprinting action in upper and lower body.
- Core strength is required to maintain posture throughout the race.

Flexibility:

- Flexibility is the range of movement around a joint. It is usually controlled by the length of the muscle.
- Flexibility enables a sprinter to perform the sprint action more efficiently and effectively. Controlled use of the full range of movement available at a joint can allow for the full extension of the correct technique, improving performance.
- A high level of flexibility increases the speed and power of muscular contraction.
- Flexibility helps improve posture, reduces lower back pain, maintains healthy joints and improves balance during movement.
- Reduce risk of injury.

Reaction time:

- The time taken to initiate a response to a given stimulus.
- It is the time between the starter firing the gun and the sprinter starting to move out of the starting blocks.
- A good reaction time will give the sprinter a good start out of the starting blocks in a race.

Power:

- Power is the application of both strength and speed.
- Power/elastic strength is the ability of the neuromuscular system to overcome resistance with a high speed of contraction.
- Power is necessary to explode out of the starting blocks.
- Power is necessary to explode in the first 30 m during the explosive acceleration phase.
- Power/elastic strength is essential in activities that involve sprinting and an athlete needs a high percentage of fast glycolytic muscle fibres to perform well.
- **Balance, co-ordination and body composition accepted.**

Award [1] for identification of component and up to [2] for explanation of importance for a sprinter.

All other valid points will be given credit.

(3 × [3])

(AO1, AO2)

[9]

(b) (i) Answers may address some of the following points:

Continuous:

- Continuous training involves continuous activity with no rest or break. Involves a steady state of sub-maximal work (running, cycling, swimming, rowing) for prolonged periods of time (20–30 minutes plus).
- Continuous training is suited to endurance athletes, when the oxygen demands of the training are met by the supply from the cardiovascular system.
- Continuous training relies on the aerobic system and it will enhance aerobic endurance and VO₂max.
- The intensity of continuous training should be moderate (60–80% Max HR).

Fartlek:

- Fartlek meaning ‘speed play’. It involves exercise often running, varying time, distance, terrain and tempo.
- Due to the changes of intensity of the exercise, fartlek training works both aerobic and anaerobic fitness. The athlete can become increasingly capable of meeting the change of pace in an endurance event.
- The content of the session is flexible, therefore, the repetitions in the session can be varied to add interest to training. Rest periods or periods of less strenuous exercise gives time to recover so training can continue.
- Athletes can control their own pacing.
- The boredom of continuous training is reduced,

Interval:

- Interval training is based on a structured period of work followed by a structured period of recovery.
- The training session is split up around a work to rest ratio.
- Interval training can be adapted to develop different types of fitness. Prolonged moderate to hard paced intervals use aerobic respiration required by endurance athletes.
- It improves an endurance athlete’s ability to tolerate the effects of lactic acid.
- Interval training is adaptable/flexible to match the needs of the endurance athlete.
- **Circuit training, weight training, aerobic endurance training and flexibility training accepted.**

Award [1] for the identification of component of fitness and up to [2] for full explanation.

All other valid points will be given credit.

(2 × [3])

(AO1, AO2)

[6]

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- (ii) Answer may address some of the following points:
- A Physical Activity Readiness Questionnaire (PAR-Q) is a good way for a Fitness Instructor to obtain information regarding the medical conditions of their clients. A PAR-Q will outline an individual's medical history and highlight any major factors that would stop them from participating. If a client answers 'Yes' to one or more questions, they should be instructed to talk to their doctor before beginning an exercise programme.
 - Fitness Instructors would use PAR-Q to determine the safety or possible risk of exercising for an individual based upon their answers to specific health history questions.
 - The Fitness Instructor needs to know the health of the individual so that they can plan a programme that is suitable to their age, health status and current activity level. They do not want to plan a programme that would endanger the client.
 - The PAR-Q will help the Fitness Instructor identify the small number of adults for whom physical activity may be inappropriate or those who should have medical advice concerning the type of activity most suitable for them. The Fitness Instructor will then advise them to see a doctor before starting a programme.

Award [1] for a key phrase and up to [3] for full explanation.

All other valid points will be given credit.

(1 × [4])

(AO2)

[4]

19

- 3 (a) Answer may address some of the following points:

Interview:

- A lifestyle coach could use structured interviews, where the interview follows a pre-set course of questions. These questions are set in advance of the interview, so that the interviewer will be able to obtain the information required.
- There is flexibility to explore points further if appropriate so that the lifestyle coach can obtain more relevant information specific to the individual client.
- There can be problems which can arise from carrying out an interview where questions about the reliability of the outcomes may be raised.
- The lifestyle coach needs to keep focused to prevent the interview becoming 'a chat' and information is missed which could be relevant.
- Interviews are very time-consuming, a lengthy interview means a lot of time spent by the lifestyle coach. The coach needs to be aware of this to make sure time is used appropriately.
- Interviews may cause the client to become anxious due to face to face nature.

Questionnaire:

- Questionnaires can be an ideal method of gathering primary data if the lifestyle coach is seeking information which is deemed sensitive.
- Time is used effectively as clients can complete the questionnaire at their leisure.
- Questionnaires can be analysed quickly, therefore enabling the lifestyle coach to get started with a client.
- It can cause problems if clients miss out questions or misinterpret questions which could alter the balance of the outcome. The client may not answer questions truthfully which could have an impact on the information which has been gathered.
- Unless carefully set out and appropriate questions asked, the client may

not provide the information that the lifestyle coach needs.

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Observation:

- Observation can be an important and useful option for a lifestyle coach to use as it allows them to see what is really happening in the life of the client.
- Lifestyle coaches could see the client in action and this gives them direct access to information that may not be obvious from other research methods.
- Observation enables the lifestyle coach to gain an in-depth understanding of the lifestyle of the client.
- A problem with this approach is that it can be viewed as too subjective, leading to bias, where the client may be doing something to please the lifestyle coach.
- Observations are very time-consuming and labour intensive for the lifestyle coach.
- The client might agree to the lifestyle coach carrying out the observation however, over time may find that it is intrusive and not want to proceed with that method.

Award [1] for identification of research method and up to [2] for the full examination of research method.

All other valid points will be given credit.

(2 × [3])

(AO1, AO3)

[6]

(b) Answers may address some of the following points:

(i) Socio-economic:

- Financial difficulties in relation to inability to pay for equipment and clothing may make it difficult to participate in some sports or physical activities.
- Financial difficulties in relation to lack of ability to pay membership fees and training costs.
- Lack of transport or ability to afford transportation costs to attend training or sporting events.
- Poor provision of facilities or inadequate facilities to train or participate. Poor provision depending on location.

(ii) Disability:

- All people have different levels of ability, a perception that a person has a lack of skill or ability as others might inhibit participation.
- Not having opportunities to access specific coaching to develop necessary skills, lack of early experience in sport may hinder someone getting involved in certain physical activities.
- Lack of understanding and awareness of how to include people with a disability in sport, limiting opportunities and programmes for participation, training and competition.
- Lack of accessibility to suitable facilities to meet the needs of all participants who wish to take part in regular physical activity or exercise.
- Reduced impact of role models.

Award [1] for key phrase and up to [2] for full explanation.

All other valid points will be given credit.

(2 × [3])

(AO2)

[6]

(iii) Answers may address some of the following points:

- The Paralympic games has raised the profile of disabled athletes. Global media broadcasting of the games highlighted the success in sport achieved by people with disabilities.
- The Paralympic games showcases athletes at the pinnacle of sport. It is a reminder that sport at the highest level should be accessible to all people.
- The Paralympic games changes the way society views disability. The Paralympics has changed the perception of many in the non-disabled population regarding what people with disabilities are capable of through sport.
- Highlights the transformative power of sport. Paralympics has left a legacy.
- The Paralympics has created role models for aspiring athletes, especially those with a disability, but are also admired by society as a whole for their achievements.
- Increased opportunities now exist from grassroots to elite levels for people with a disability to showcase their abilities in sport.
- Improved accessibility in relation to facilities and transport.
- Increased funding available for Paralympic athletes for equipment, travel and competition costs.
- Enhanced competitive opportunities.
- Greater access to specialised coaching.
- Despite the success of the Paralympic games there remains less provision and access for disabled athletes to participate in sport.

Award [1] for key phrase and up to [2] for explanation.

All other valid points will be given credit.

(1 × [3])

(AO2)

[3]

(c) (i) Answers may address some of the following points:

- To maintain motivation individual goals need to be set. Short/medium and long term goals can be set to motivate an individual.
- Goals need to be S.M.A.R.T.E.R.
- Specific – Tailored to the individual and take into account their background and health status.
- Measurable – Individual's should be fitness tested using sub-maximal and maximal tests to provide an indication of level of fitness.
- Achievable- Goals must be achievable or motivation will be lost.
- Realistic – Goals must be set within the capabilities of the individual or motivation will be lost.
- Time-bound – Setting short, medium and long term goals focuses attention and maintains motivation.
- Exciting – Setting challenging and exciting goals motivates an individual.
- Recorded – Keeping a record of goals and fitness test results can be a reminder of achievements and can maintain motivation.

Award [1] for key phrase and up to [2] for full explanation.

All other valid points will be given credit.

(1 × [3])

(AO2)

[3]

(ii) Answers may address some of the following points:

- Promotes friendships and positive relationships.
- Develops community cohesion playing in a team based in an individual's community.
- Healthy competition, testing yourself against others. Through participation in sport and physical activity individuals learn to deal with winning and losing.
- Self-discipline and conduct etiquette is learnt through sport.
- Being active can reduce the sense of isolation and loneliness.
- There are many skills gained from being part of a team, development of leadership skills, and development of empathy, which can influence healthy behaviours.
- Sport has helped individuals build social skills and has deterred anti-social behaviour.

Award [1] for description of each benefit.

All other valid points will be given credit.

(3 × [1])

(AO2)

[3]

(d) (i) **Before an event (pre-event):**

- Carbohydrate loading enables athletes to start their event with full storage of glycogen. This enables the athlete to perform at their peak level.
- Carbohydrate loading can be completed by eating a carbohydrate 'rich' diet in the 2–3 days leading up to the event to ensure glycogen stores in the muscle and liver are complete.
- Another method of carbohydrate loading involves completing a glycogen depletion training session 6–7 days before the event. The next 3 days involve tapered training and a normal diet, then 3 days before the event eat a carb rich diet.
- Pre-event meal/snack, high in carbohydrate 2–4 hours before.
- Hydration levels need to be monitored. Water/isotonic sports drinks should be consumed.
- Drink 400–600 ml of fluid 2–3 hours prior, and then 150–350 ml about 15 minutes before the event

(ii) **During an event:**

- Top up glycogen stores – take energy gels during the cycle. These provide the body with simple sugars (glucose & fructose), which are a quick efficient fuel that can be used for energy during the cycle.
- Maintain hydration levels – consume water
- Consume isotonic sports drinks during event. Isotonic drinks can maintain blood glucose levels, replace lost fluids and electrolytes.
- Ingesting carbohydrates with a high glycaemic index ratings (how quickly they are converted and enter the bloodstream) will help maintain a sustained level of blood sugar.

(iii) After an event (post-event):

- Post event high carbohydrate snack should be consumed within 30 minutes of the event to replenish glycogen stores.
- 50g–100g of carbohydrate should be consumed post event.
- Post event snack/drink should contain some protein to promote muscle repair
- Eat a carbohydrate rich meal 2–4 hours post event.
- Isotonic sports drinks are a quick and convenient way to refuel, replace electrolytes with the added benefit of rehydration.

Award [1] for identification of key phrase and up to [2] for full description.
All other valid points will be given credit.

(3 × [3])

(AO1, AO2)

[9]

30

4 (a) Answers may address some of the following points:

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GP Referral Scheme:

- GP Referral Scheme, also known as exercise-on-prescription, with the aim of promoting a healthier lifestyle for individuals with certain medical conditions. With the increasing numbers of patients suffering from chronic illnesses in the UK, the benefits of exercise in disease prevention and rehabilitation has become more prevalent.
- The GP Referral Scheme lasts for 12 weeks and is supervised by qualified staff, working in conjunction with the medical staff. The clients will be given a safe and effective training programme which is the start to a more active, healthier lifestyle.
- The GP Referral Scheme uses exercise to assist post-operative recovery, improvement in mobility, tackle insomnia, reduction/relief of back pain and aids weight loss, as well as improving fitness and self-esteem.
- Research has shown that regular exercise, using the GP Referral Scheme as a starting point for clients, can improve a broad range of physical and psychological medical conditions including diabetes, obesity, angina, asthma, arthritis, hypertension, anxiety and depression.
- Not all people will feel confident following a training programme.
- People may not have access to transport to avail of this scheme.

5 A Day Initiative:

- The 5 A Day initiative is aimed at getting people to increase the amount of fruit and vegetables they consume on a daily basis.
- 5 A Day highlights the health benefits of getting five 80g portions of fruit and vegetables daily which can help to improve and maintain people's health, boost immune system, have a healthy body, lowers the chances of disease, obesity, type 2 diabetes, stroke and some cancers.
- Enables people to achieve a balanced diet by incorporating fruit and vegetables, addressing vitamin and mineral consumption. Fruit and vegetables are low in fat and calories, enabling people to maintain a healthy weight and keeping their heart healthy.
- It can be expensive to consume a diet of 5 A Day.

Change4Life Initiative:

- Change4life is a government backed initiative. The government has looked for support from grass roots organisations to leading supermarkets and charities to create a lifestyle revolution on a huge scale.
- Change4life aims to create a movement in which everyone in society plays their part, helping to create fundamental changes to those behaviours that can help people lead healthier lives.
- Change4life aims to help people make small, sustainable changes yet significant improvements in their diet and activity levels. It uses the slogan 'eat well, move more, live longer'.
- Continual promotion of the Change4life initiative is necessary to continue to ensure the message is communicated to all in society.
- **Healthy schools and cycle to work scheme accepted.**

Award [1] for identification and up the [2] for full analysis.

All other valid points will be given credit.

(3 × [3])

(AO1, AO3)

[9]

(b) The quality of written information is assessed in this question.

Answers may address some of the following points:

- Promotion of outside play.
- Encourage children to engage in moderate to vigorous intense physical activity for at least 60 minutes per day.
- Encourage spontaneous play as well as organised sports.
- Reduce time allowed for passive leisure activities, e.g. TV, Computer games.
- Follow Government healthy eating recommendations visually depicted in the eatwell plate, encouraging a healthy balanced diet. This is made up of portion controlled components of carbohydrates, proteins, fats, vitamins, minerals, fibre and water.
- Televised advertisements promoting a healthy diet and exercise for young people.
- Encourage children to eat at least five 80g portions of a variety of fruit and vegetables a day.
- Schools can promote a culture of sport within the school. This can ensure pupils are more likely to develop a lifelong enjoyment and involvement in sport e.g. extra-curricular school sport.
- Schools must allocate appropriate curriculum time and develop a specific PE programme in order to provide sufficient opportunities for pupils.
- Safety concerns of outside play, e.g. traffic
- Lack of parental knowledge of a healthy diet and portion size.
- Cost implications of a healthy lifestyle and diet.
- Shock methods used in advertising campaigns wear off.

All other valid points will be given credit.

Level 1 ([1]–[3])

Overall impression: Basic

- Basic knowledge and understanding of the methods used to prevent childhood obesity. The candidate may include basic examples.
- Demonstrates a basic ability to discuss the methods used to prevent childhood obesity. The candidate will provide basic explanations.
- Quality of written communication is basic. The candidate makes a limited selection and use of an appropriate form and style of writing. The organisation of material may lack clarity and coherence. There is little use of specialist vocabulary. Presentation, spelling, punctuation and grammar may be such that intended meaning is not clear.

Level 2 ([4]–[6])

Overall impression: Good

- Good knowledge and understanding of the methods used to prevent childhood obesity. The candidate will provide relevant examples.
- Demonstrates a good ability to discuss the methods used to prevent childhood obesity. The candidate will provide relevant explanations, using specific examples.
- Quality of written communication is good. The candidate makes a reasonable selection and use of an appropriate form and style of writing. Relevant material is organised with some clarity and coherence. There is adequate use of specialist vocabulary. Presentation, spelling, punctuation and grammar are sufficiently competent to make meaning clear.

Level 3 ([7]–[8])

Overall impression: Excellent

- Excellent knowledge and understanding of the methods used to prevent childhood obesity. The candidate will provide fully developed examples and show excellent understanding.
- Demonstrates an excellent ability to discuss the methods used to prevent childhood obesity. The candidate will provide thorough explanations and will use a variety of relevant examples.
- Quality of written communication is excellent. The candidate successfully selects and uses an appropriate form and style of writing. Relevant material is organised with a degree of clarity and coherence. There is extensive and accurate use of specialist vocabulary. Presentation, spelling, punctuation and grammar are of a high standard and ensure the meaning is clear.

[0] is awarded for a response not worthy of credit.
(AO1, AO3)

[8]

17

5 (a) Answers may address some of the following points:

- A healthy workforce is beneficial to employers, by creating a positive, safe and healthy environment for employees. This environment will increase staff morale, improve the employees' work-life balance, also having a positive impact on the business.
- Less absenteeism, healthy workers are more motivated to stay in work, recover quicker and are at less risk of long-term illness. Organisations stand to make substantial cost savings by promoting health in the workplace and reducing sickness absence. This will reduce sick pay costs, insurance costs and pressures on employees covering for those who are absent.
- A healthier, happier workforce leads to increased productivity, as staff are fully engaged and staff morale is high. Having healthy stress-free and well-motivated employees could result in higher performance levels.
- Improved retention, positive, healthy work environments can reduce employee turnover and recruitment costs.
- Greater employee resilience. Healthier employees are, in general more resilient and better able to cope with the changes, uncertainty and ambiguity which are now more common in modern organisations.
- Higher employee commitment. Healthy employees are more committed to the organisation.

Award [1] for key phrase and [1] for explanation.

All other valid points will be given credit.

(2 × [2])

(AO2)

[4]

(b) **The quality of written communication is assessed in this question.**

Answers may address some of the following points:

Active and healthy lifestyle:

- A healthy and active lifestyle is when diet and work life balance are considered and managed appropriately with regular exercise.
- WHO recommends that for good health an adult should do at least 150 mins of moderate intensity aerobic physical activity throughout the week.
- Healthy eating recommendations are usually depicted on the eatwell plate encouraging a healthy balanced diet.
- Reduce alcohol intake and nicotine use.

Diabetes:

- Diabetes is a disease characterised by the inability of the body to make sufficient insulin or, alternatively the resistance of the body to insulin, which makes it less sensitive to insulin.
- Diabetes is treatable. Dietary and other lifestyle adjustments are part of the management of the disease.
- Being physically active improves glucose levels.
- Exercising, has a positive effect on body fat and blood pressure levels. Burning excess body fat helps to decrease and control body weight which results in improved insulin sensitivity.

Osteoporosis:

- Osteoporosis is a degenerative bone disease characterised by the thinning of bones. Bones become brittle and more prone to fractures, as the mineral density of the bones is decreased.
- Osteoporosis is largely preventable for most people and requires a healthy diet with the recommended daily amount of calcium and vitamin D.

- Incorporating weight-bearing exercise into an individual's routine can prevent the development of osteoporosis. Weight-bearing exercises, for example walking, jogging and aerobics are effective in building bone density.

Coronary Heart Disease (CHD):

- Coronary heart disease is characterised by the deposit of fatty substances on the lining of the artery walls. Over time this deposit builds up and affects the flow of blood.
- An active lifestyle can prevent CHD. Individuals need to participate regularly in physical activity, government guidelines recommend 30 minutes/5 days a week for adults and 60 minutes per day for children.
- Individuals need to do moderate intensity exercise which will increase the heart rate, working within the appropriate age related training zone.
- Exercising appropriately will improve the efficiency of the heart and circulatory system. It will increase the levels of HDLs (high density lipoproteins) and help break down LDLs (low density lipoproteins).
- A balanced diet will help prevent CHD. A low cholesterol diet will prevent a build up of plaque or atheroma on the walls of the coronary arteries.
- Food consumption needs to be considered and adapted to prevent CHD. Food high in salt, sugar and fat needs to be reduced. High saturated fat will increase levels of LDLs in the blood. Low salt intake will be a preventative measure against CHD.
- A reduction in alcohol consumption, drinking in moderation, using the government recommended alcohol intake guidelines will help prevent CHD.
- Cessation of smoking will also help prevent CHD.

Hypertension:

- A person is deemed to have hypertension if their blood pressure consistently reads at 140/90 or higher.
- Hypertension or high blood pressure puts extra strain on the blood vessels, heart and other organs. Complications can arise – increased risk of heart attack or stroke.
- Regular physical activity makes the heart stronger. By exercising, the strong heart can pump more blood with less effort. The force on the arteries decreases, lowering blood pressure.
- An active lifestyle can reduce stress levels. Individuals will be less likely to suffer from hypertension.

Obesity:

- A person is classed as being obese when their body fat levels exceed 20% or more.
- Results from energy imbalance. Too many calories in, too few calories burned. This excess energy is then stored as fat. Obese people are at risk of developing a number of medical conditions which can cause poor health. By exercising, people will burn up calories, which should then result in the person being in negative energy balance.
- When exercising, people will start to burn kilocalories from their fat stores and will lose weight.
- When participating in physical activity, combined with a balance diet, it can help to prevent obesity and aid weight management.

All other valid points will be given credit.

Level 1 ([1]–[4])

Overall impression: Basic

- Basic knowledge and understanding of how an active and healthy lifestyle can prevent hypokinetic disease. The candidate may include basic examples.

- Demonstrates a basic ability to discuss how an active and healthy lifestyle can prevent hypokinetic disease. The candidate will provide basic explanations.
- Quality of written communication is basic. The candidate makes a limited selection and use of an appropriate form and style of writing. The organisation of material may lack clarity and coherence. There is little use of specialist vocabulary. Presentation, spelling, punctuation and grammar may be such that intended meaning is not clear.

Level 2 ([5]–[7])

Overall impression: Good

- Good knowledge and understanding of how an active and healthy lifestyle can prevent hypokinetic disease. The candidate will provide relevant examples.
- Demonstrates a good ability to discuss how an active and healthy lifestyle can prevent hypokinetic disease. The candidate will provide relevant explanations, using specific examples.
- Quality of written communication is good. The candidate makes a reasonable selection and use of an appropriate form and style of writing. Relevant material is organised with some clarity and coherence. There is adequate use of specialist vocabulary. Presentation, spelling, punctuation and grammar are sufficiently competent to make meaning clear.

Level 3 ([8]–[10])

Overall impression: Excellent

- Excellent knowledge and understanding of how an active and healthy lifestyle can prevent hypokinetic disease. The candidate will provide fully developed examples and show excellent understanding.
- Demonstrates an excellent ability to discuss how an active and healthy lifestyle can prevent hypokinetic disease. The candidate will provide thorough explanations and will use a variety of relevant examples.
- Quality of written communication is excellent. The candidate successfully selects and uses an appropriate form and style of writing. Relevant material is organised with a degree of clarity and coherence. There is extensive and accurate use of specialist vocabulary. Presentation, spelling, punctuation and grammar are of a high standard and ensure the meaning is clear.

[1] is awarded for a response not worthy of credit.
(AO1, AO3)

[10]

14

Total

100

**AVAILABLE
MARKS**