



# **GCSE MARKING SCHEME**

**PHYSICAL EDUCATION**

**SUMMER 2013**

## **INTRODUCTION**

The marking schemes which follow were those used by WJEC for the Summer 2013 examination in GCSE PHYSICAL EDUCATION. They were finalised after detailed discussion at examiners' conferences by all the examiners involved in the assessment. The conferences were held shortly after the papers were taken so that reference could be made to the full range of candidates' responses, with photocopied scripts forming the basis of discussion. The aim of the conferences was to ensure that the marking schemes were interpreted and applied in the same way by all examiners.

It is hoped that this information will be of assistance to centres but it is recognised at the same time that, without the benefit of participation in the examiners' conferences, teachers may have different views on certain matters of detail or interpretation.

WJEC regrets that it cannot enter into any discussion or correspondence about these marking schemes.

## PAPER 1 AND SHORT COURSE

### SECTION A

#### Q.1 Video clip of Fitness Test

- (a) (i) Name the physical fitness test observed in the video clip. [1]
- 30m sprint test  
Sit and reach test  
Multi stage fitness test ✓  
1 Rep max  
Vertical jump
- (ii) Identify the major component of health related fitness that is being tested [1]
- Cardio vascular endurance ✓  
Co-ordination  
Balance  
Flexibility  
Speed
- (iii) Explain your answer given in (a) (ii) [2]
- Continuous running
  - Intensity – Moderate
  - MSFT - Measure of CV endurance
  - Duration
- (b) Describe the procedures for the test observed in the video [3]
- Warm up
  - Play tape/DVD from start
  - 20m Distance
  - Run in time with beeps
  - Turn on beeps
  - Drop out when reach max Heart Rate
  - Stop if miss two/three consecutive beeps
  - Sports Hall floor only
  - Progression/frequency
  - Recording level when drop out
- (c) Identify three reasons why testing is important to a health or fitness exercise programme. [3]
- It allows:
- Athletes to compare levels of fitness ✓
  - Athletes to realise the coach is in charge ✓
  - Athletes to increase or reduce the frequency of training ✓
  - Athletes to boast to other athletes about their fitness ✓
  - Athletes to measure progress ✓
  - Athletes to plan their holidays ✓
  - Parents to check up on the athletes ✓
  - Athletes to check their weight ✓

(d) (i) Name a method of training that could be used to help in developing cardiovascular fitness. [1]

- Circuit
- Interval
- Plyometrics
- Continuous
- Weight
- Fartlek
- Altitude

(ii) Describe how this method of training would differ when designing a health related fitness programme for the athlete and a sedentary individual [2]

- Low intensity work for a sedentary individual
- High intensity work to develop fitness for an athlete
- Athlete able to exercise for longer
- Type of exercise e.g. swimming and cycling compared with running
- Any opposites one mark only

(iii) In the table below identify the health benefits from following a training programme for fitness. [3]

Complete the table:

	<b>Benefit</b>
<b>Physical</b>	
<b>Social</b>	
<b>Mental</b>	

- Physical - improved fitness/health, cardio respiratory, cardio vascular, reduced blood pressure, obesity, avoid injury
- Social - meeting friends, adherence, team work
- Mental well-being - motivation, focus, reduction in aggression, body image

(3x1) within each area

**Total marks [16]**

**Q.2** Video clip of cricket

- (a) (i) Identify **one** of the main physical fitness components demonstrated by the batsmen in the video clip. Tick one box only. **[1]**

Agility	✓
Flexibility	✓
Balance	✓
Strength	✓
Cardiovascular endurance	
Speed	✓
Muscular endurance	

- (ii) Explain your answer given in 2(a) (i). **[2]**

Definition / link component to video (2x1)

e.g. speed - getting to the other end before the ball/fielder throws in

e.g. agility - as they turn and run back to where they started

- (iii) Describe a method of fitness training that could be used to help in developing the component of fitness identified in 2(a) (i). **[2]**

- Interval training
- Skill session/Fartlek - description or training method appropriate to component identified

- (iv) Describe how this method of training could improve performance in a sporting activity of your choice. **[2]**

- Application of component to method
- Intensity
- Duration
- Specificity

- (b) (i) Identify **one** main skill related fitness component demonstrated by the batsmen in the video clip. **[1]**

Reaction time	✓
Body composition	
Coordination	✓
Muscular endurance	
Cardiovascular endurance	

- (ii) Explain your answer given in 2(b)(i). **[2]**

(1+1)

Definition (1)

Explanation (1)

Or (2) for explanation linking component to video clip

- (c) (i) Through observing the video clips explain safety precaution that have been taken to minimise the risk of injury. **[2]**
- Appropriate footwear
  - Equipment e.g. pads, helmet
  - Rules e.g. playing within rules
  - Officials
  - Good technique (2x1)

- (ii) Describe why keeping a diary, monitoring heart rate and counting calories are important parts of evaluating a health and fitness programme. **[4]**

Complete the table below.

<b>Technique</b>	<b>Importance</b>
Diary Keeping	To apply principles of training, monitor improvement, goal setting/motivation
Heart monitoring	Training zones - specificity, progression, reduction, fitter, heart rate reduction in training / recovery
Calories Counting	Energy balance - input/output

(3x1) +1 for amplification

**Total marks [16]**

- Q.3** (a) (i) Give three reasons why Physical Education is a compulsory subject in the National Curriculum. **[3]**
- Life skill
  - Health
  - Opportunities
  - Learning
- (ii) Describe the factors that affect provision for sport in your local community. **[3]**
- Facilities
  - Coaches
  - Funding/Finance
  - Demands for ...
  - Government initiatives
  - Access
- (b) Participation in sport and exercise is influenced by a number of factors. Discuss. **[6]**
- Body image
  - Ability
  - Access to facilities
  - Parents
  - Peer group
  - Teachers
  - Opportunity
  - Coaches
  - Health
  - Olympics
  - Media

**Level 1 (1-2)**

Just factors. List. No amplification

**Level 2 (3-4)**

There is limited knowledge of the reasons why they participate. Answers show some amplification.

**Level 3 (5-6)**

Good knowledge of factors influencing participation. Answers are amplified and developed.

(c) 'Men's and women's sport have equal **media** coverage. Discuss. [6]

Candidates must enter into a debate to access level 3

- History
- Tradition
- Men more interested in sport
- Men watch more sport
- Women's less sponsorship
- Fewer female role models
- Exceptions such as tennis and Olympic coverage

**Levels 1 (1-2) List and describe coverage**

**Level 2 (3-4) Some amplification and explanation**

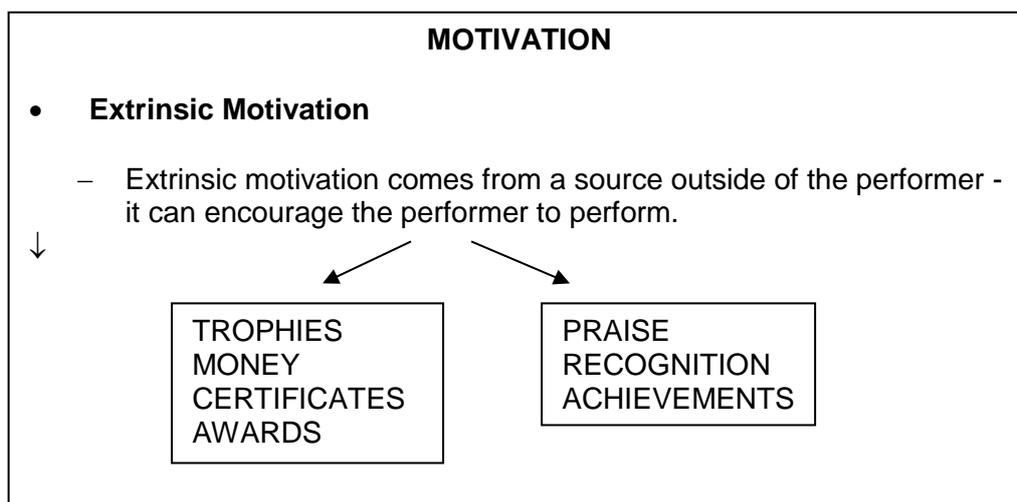
**Level 3 (5-6) Candidates enter into discussion of various issues.**

**Total marks [18]**

## SECTION B

- Q.4.** (a) Physical fitness is  
 A set of attributes that are either health or skill related [1]
- (b) Name one motivational factor which has encouraged you to take part in physical activity. [1]

<b>Motivation</b>
<b>Intrinsic Motivation</b>
– This is the inner drive to achieve success and a pride and satisfaction in completing a task. It can also be a determination to achieve personal goals.
– This inner drive is enough to enthuse sportspersons to practice, train and compete.
– Taking part in physical activity for fun, enjoyment, joy and satisfaction,
– The challenges, satisfaction, sense of achievement and a desire to maintain healthy, active lifestyle are intrinsic reasons motivating many people to take part in physical activities and sport.



Answers can include Extrinsic and/or Intrinsic motivation

- Accept 'extrinsic' or 'intrinsic'
- Media
- Olympics

- (c) Suggest one strategy to ensure that you continue to take part in physical activity. [1]

#### **ADHERENCE STRATEGIES**

- Set realistic measurable goals (performance plus outcome).
- Make a plan.
- Train to music.
- Keep a diary.
- Be committed to the cause.
- Establish a time frame.
- Convenience – fitting in exercise.
- Use electronic monitoring.
- Re-evaluate plans if not achievable.
- Short and snappy training.
- Location – gym/home.
- Establish social support friends/family.
- Share goals.
- Set a routine.
- Monitor progress (feedback assistance and motivation).
- Use fitness testing.
- Use competition.
- Choose an activity you like.
- Manage time.
- Have back-up plans.
- Learn a new activity – presents a challenge.
- Set goals which are achievable.
- Set intensity and duration of exercise to suit purpose.
- Begin with easy tasks.
- Correct facilities – affordable.
- Safe facilities.
- Have fun.

Any strategy drawn from above

- (d) Name **one recent technological development** which has encouraged participation in physical activity. [1]

Open ended question - but there should be a link between the development and **participation**.

e.g. be careful here - as it can be questioned as to whether 'hawk-eye' has encouraged participation.

- Accept 'improved performance'
- Media coverage

'Technical development' within media - accept - e.g. Red Button

- Q.5.** (a) Antagonists – Muscles that relax to allow movement to take place.  
 Prime Movers – Muscles that are used to produce movement  
 Flexors – Muscles that bend a limb at a joint  
 Extensors – Muscles that straighten a limb at a joint [4]

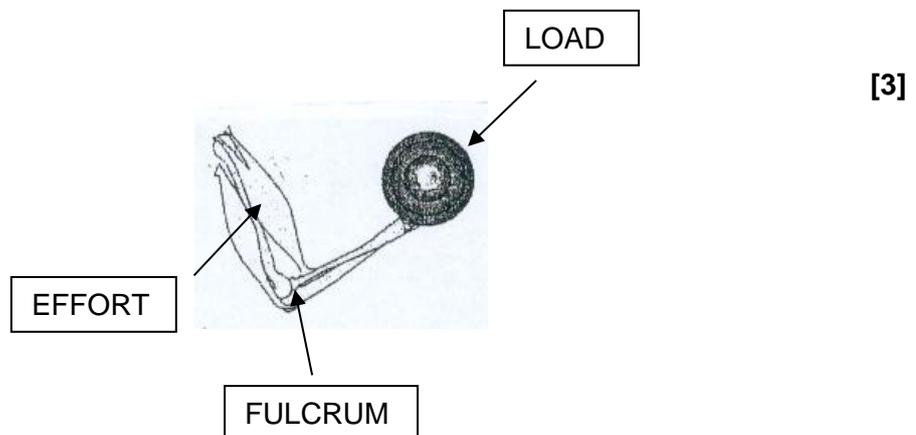
(b) (i) Tendons are non-elastic connective tissue attaching muscle to bone [1]

(ii) 1 = ISOTONIC - CONCENTRIC - Either [2]  
 2 = ISOMETRIC

(iii) Name one function of the 3<sup>rd</sup> order lever [1]

- Generate more force
- Produce a greater range of movement - Accept Flexion/Extension
- Increase speed at which the body moves

(iv)



- Accept the letter 5 E/F/L for effort, fulcrum, load.

**Q.6** (a) Match the following responses to the relevant stages of the Information Processing Model **[3]**

- Players' brain sends messages to his muscles to execute the shot

OUTPUT

- Player senses the speed, spin and flight of the ball.

INPUT

- Player has to quickly opt for the most appropriate return.

DECISION MAKING

(b) (i) Give **two** reasons to explain how **feedback** helps in the learning process **[2]**

<b>Information Processing</b>
Feedback:
• is essential for learning to take place
• is the response to the OUTPUT and affects all actions that follow
• helps correct and improve performance making you more skilful - skills will be modified or adapted where needed and learnt
• helps to reinforce good behaviour/actions
• can identify strengths and weaknesses in performance
• can influence the speed of learning
• can influence goal-setting
• will encourage and motivate
• enables evaluation and analysis of performance
• reinforces correct actions and analysis of performance
• reinforces correct actions and shapes future behaviour by refining technique

- (ii) Describe **how** a teacher/coach should present feedback to a sports performer. The following words may help: What? How? When? [3]

<b>Information Processing</b>
“Effective feedback for a sports performer should be easily understood”
Listed are other ways in which a teacher/coach can give feedback to make it effective for a sports performer
• accurately
• truthfully
• concisely
• immediately
• easily understood
• fits the needs of the performer
• positive - highlighting strengths and ways to improve perceived weakness
• information giving
• frequency - danger of overloading with information
• analytically

**Total marks [8]**

**Guidance - how it can interact with feedback.**

**Can award 1 mark for guidance, but 3 marks for separate forms of guidance.**

- Q.7** (a) Name **two** features that can control body weight. **[2]**
- Regular Exercise
  - Balanced Diet
- Accept 'diet' and 'exercise'.
- (b) Body composition is: **[1]**
- The proportion of fat in the body compared to muscle and bone.
- (c) (i) Which nutrient is the main source of energy for working muscles? **[1]**
- CARBOHYDRATE
- (ii) Which nutrient if taken in excess, can lead to obesity and high cholesterol levels? **[1]**
- FAT
- (iii) Which nutrient releases energy slowly?
- FAT

**Total marks [6]**

**Q.8** (a) Describe the characteristics of a sportsperson at the:

- Cognitive Stage of Learning.
- Autonomous Stage of Learning.

**[4]**

<b>Skill and Stages of Learning</b>
<b>COGNITIVE STAGE</b>
<ul style="list-style-type: none"> <li>• The beginners need to understand what to do</li> <li>• A clear mental picture of the activity required</li> <li>• A lot of time must be given to performing the technique</li> <li>• Outcome isn't so important at this time</li> </ul>
<ul style="list-style-type: none"> <li>• The beginners need to be shown and told what to do</li> <li>• Clear demonstrations, simple and not overloaded instruction</li> <li>• Many mistakes will occur, help would be needed to learn from the mistakes</li> </ul>
<ul style="list-style-type: none"> <li>• Praise is important in feedback</li> </ul>

<b>Skill and Stages of Learning</b>
<b>AUTONOMOUS STAGE</b>
<ul style="list-style-type: none"> <li>• Skills have become automatic</li> <li>• Allows for more concentration on the outcome of the skill and to the tactical and strategic decisions of the activity</li> <li>• Few errors, and they can be self-corrected</li> <li>• Coaching only needed for the finer details of skill and tactics</li> <li>• Consistency is high, movement is smooth and fluent</li> <li>• Intense practice needed</li> </ul>

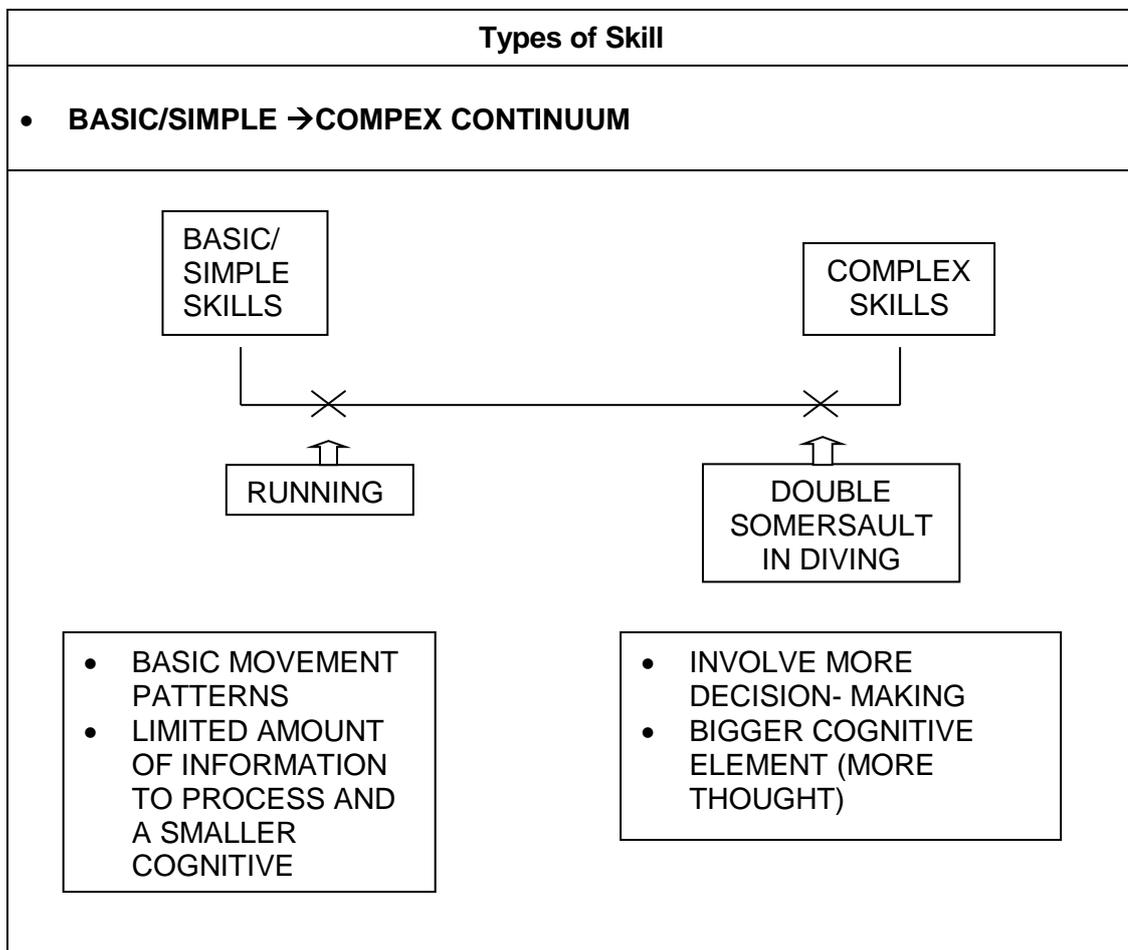
**2+2**

- (b) (i) **Ability** can be defined as: [1]  
The natural capacity for, e.g. speed, strength, etc.
- (ii) **Environmental factors** decide to what extent a skill is open or closed  
e.g. weather

Name two other factors. [2]

Types of Skill
<ul style="list-style-type: none"> <li><b>ENVIRONMENT</b></li> </ul>
The influences which decide to what extent a skill is open or closed:
VENUE - OPPOSITION - OWN TEAM - TYPE OF COMPETITION - STAGE OF THE GAME - STATE OF THE GAME - SURFACE - CROWD - EXTENT OF PRESSURE

- (iii) Explain why the skills on the continuum below have been placed in this position [2]



**Q.9**

Describe the factors which need to be considered for practice in physical activity to be meaningful and relevant.

**[6]**

- Nature of skill involved, e.g. open/closed - simple/complex.
- Amount of technical knowledge needed.
- Amount of information performer needs to process - Guidance.
- Environmental factors.
- Previous experiences.
- Personality and how well motivated performers are.
- Expectations/goals/practice objectives.
- Attitude.
- Analysis opportunity.
- Good communication - Feedback.

Candidates could discuss the 'mechanics' of the practice itself:

- Type of practice, e.g. Whole/part, etc.
- The speed and pressure being applied to the practice.
- Practices have to mirror performance conditions with appropriate equipment.
- Appropriate input by coaches at relevant times.
- Recovery/rest - appropriate to demands to practice.
- Safety issues.
- Size of group.
- Ability of group - stages of learning
- Phases of a practice session: warm up/fitness/skills/games/warm down
- Modified - conditioned scenarios.
- Unopposed - passive opposition - active opposition.
- Smart, sport (all of is 1 mark) - only 1 each

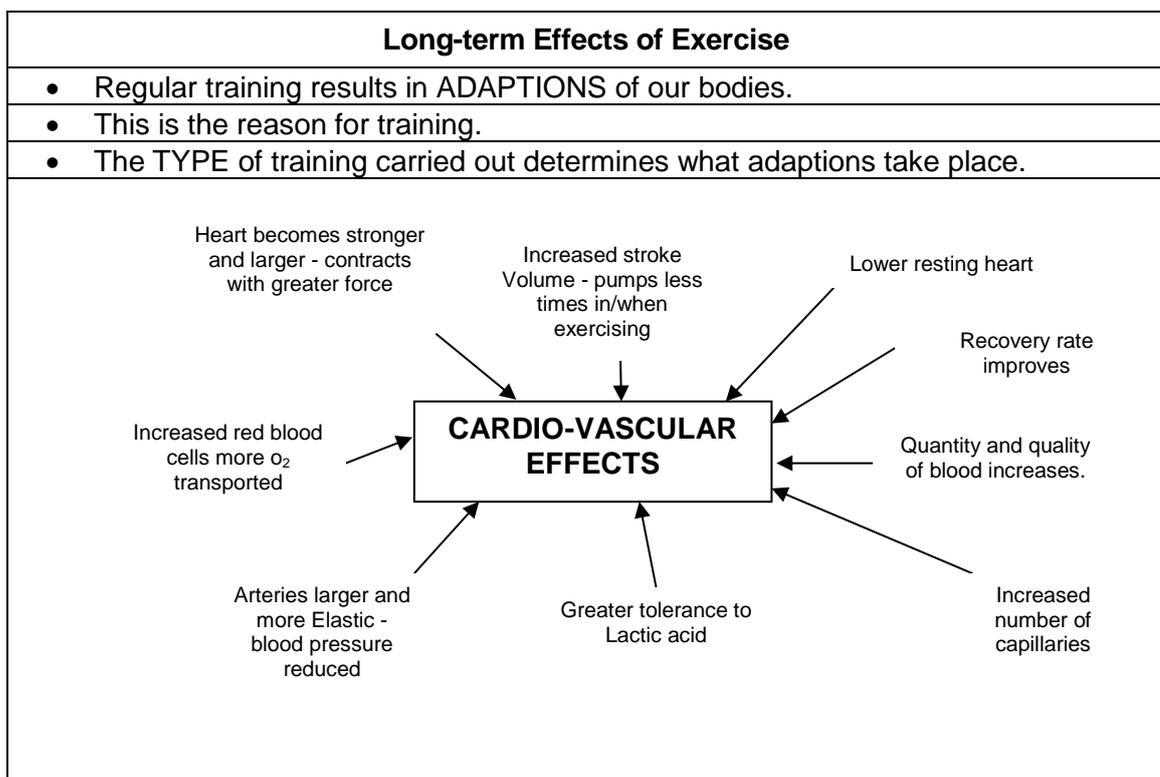
**All equally of importance.**

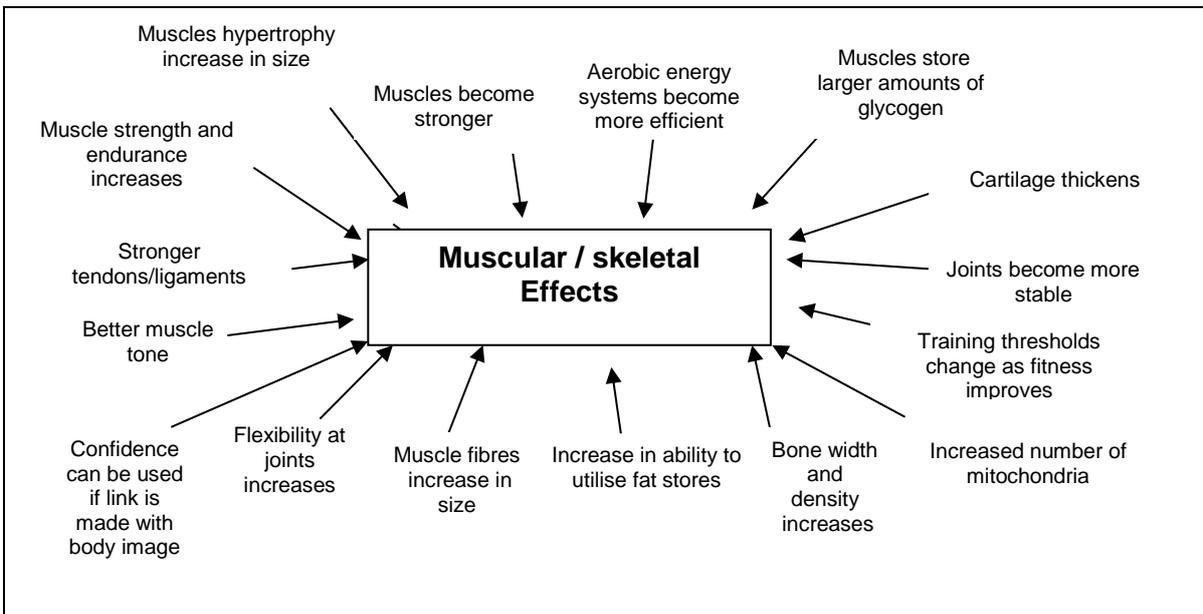
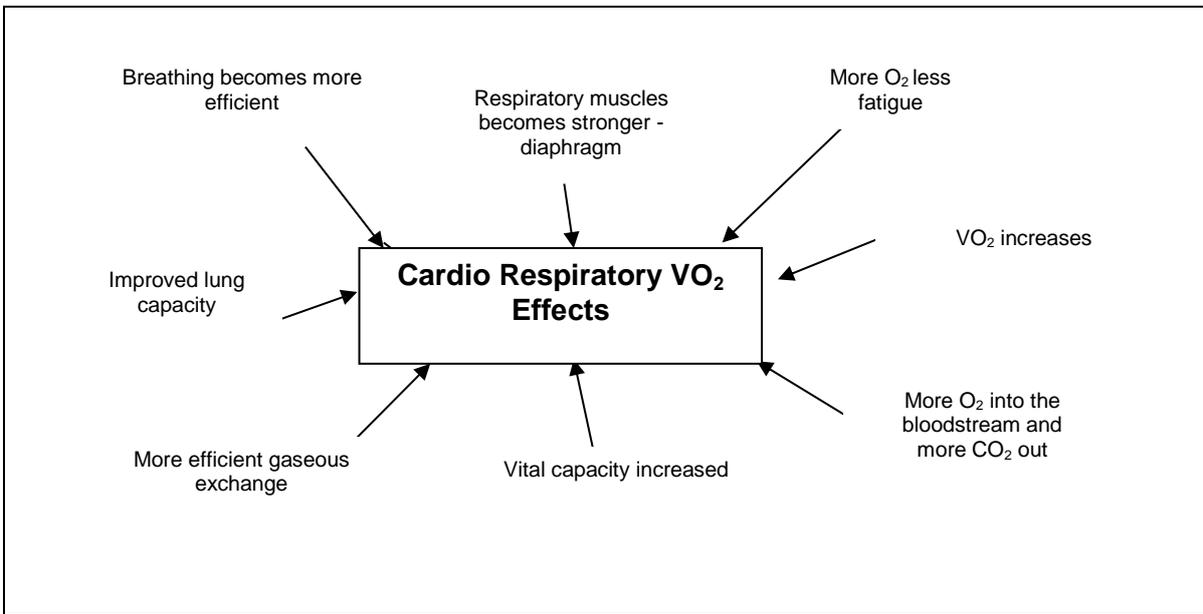
Level 1	1-2	Basic descriptive knowledge and understanding of the importance of practice in the process of learning.
Level 2	3-4	Knowledge of how Practice makes skill habitual, consistent, reliable, efficient, effective, accurate :- by taking into account some of the factors which have to be considered.
Level 3	5-6	Well developed answer with high order knowledge and understanding of the factors necessary to make Practice meaningful and relevant. Examples in a physical activity would be evident.

**Q.10** Discuss how the **long term effects** of exercise can benefit **sporting performance**.

[6]

<b>Links Between Long-term effects of training and performance in physical activity</b>
Candidate should be able to use their knowledge of the systems of the body, training and methods and long term adaptations of training to make the links:-
Below are some samples that can be made, but they vary according to the identified needs of the performer:
Links with performance
<ul style="list-style-type: none"> <li>• Recovery rates.</li> <li>• Heart copes with stress/stroke.</li> <li>• Lactic acid tolerance.</li> <li>• Increased amount of O<sub>2</sub> going to working muscles helps reduce the effects of fatigue.</li> <li>• Muscle hypertrophy.</li> <li>• Muscle strength.</li> <li>• VO<sub>2</sub> max implications - high VO<sub>2</sub> max means people can work at a higher rate for longer - suffer less fatigue.</li> <li>• Anaerobic threshold increases - work harder and longer before tiring.</li> <li>• Ligaments - flexibility links.</li> <li>• CO<sub>2</sub> removal from strenuous work - because it reduces ability to carry O<sub>2</sub> in the blood.</li> </ul>





Level 1	1-2	Basic listing of some long term effects of exercise. Little/no link with performance improvement.
Level 2	3-4	Greater Knowledge and Understanding of more long term effects of exercise and their benefit on performance. Some links to sporting performance.
Level 3	5-6	Well developed answer with high order knowledge and understanding of the links between the long term effects of exercise and improvement or otherwise of performance.



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