Physical Education (J587)

J587/01, Physical factors affecting performance, June 2022
Tom Nayler

Please note that you may see slight differences between this paper and the original.

Candidates answer on the Question paper.

OCR supplied materials:
Additional resources may be supplied with this paper.

Other materials required:
- Pencil
- Ruler (cm/mm)

Duration: 60 mins

INSTRUCTIONS TO CANDIDATES

- Write your name, centre number and candidate number in the boxes above. Please write clearly and in capital letters.
- Use black ink. HB pencil may be used for graphs and diagrams only.
- Answer **all** the questions, unless your teacher tells you otherwise.
- Read each question carefully. Make sure you know what you have to do before starting your answer.
- Where space is provided below the question, please write your answer there.
- You may use additional paper, or a specific Answer sheet if one is provided, but you must clearly show your candidate number, centre number and question number(s).

INFORMATION FOR CANDIDATES

- The quality of written communication is assessed in questions marked with either a pencil or an asterisk. In History and Geography a *Quality of extended response* question is marked with an asterisk, while a pencil is used for questions in which *Spelling, punctuation and grammar and the use of specialist terminology* is assessed.
- The number of marks is given in brackets **[ ]** at the end of each question or part question.
- The total number of marks for this paper is **60**.
- The total number of marks may take into account some 'either/or' question choices.

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Question			Answer/Indicative content	Marks	Guidance
1			One mark for: long / triple / high jump **OR** javelin / discus / shot / hammer **OR** pole vault **OR** sprint hurdles/hurdles	1 (1 × AO2)	Answers must be athletic events, not swimming! **Do not accept** 100m/200m/400m **OR** any running event longer than 400m. Examiner's Comments Many candidates correctly named an anaerobic athletic event. Some responses stated swimming events or weightlifting, suggesting that the word 'athletic' had not been acknowledged. Candidates are reminded that questions should be read carefully.
			Total	1	
2	a		One mark for: **Coordination**	1 (1 × AO1)	Examiner's Comments Most candidates identified coordination as the fitness component measured by the wall throw test. The second part of the question proved more challenging. Answers were required to show an understanding of coordination and apply their knowledge to a sporting example of their choice. Responses that only named a skill, for example catching a cricket ball, did not show the importance of coordination in the performance of this skill. **Assessment for learning** Centres are encouraged to challenge candidates to explain each of the components of fitness and apply them to a range of sport skills. Questions should focus on how each fitness component enables the skill to be performed successfully. This knowledge is required in the 'analysis' section of the AEP and should be reinforced to strengthen exam technique

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Question			Answer/Indicative content	Marks	Guidance
	b		One mark for: moving different limbs/body parts to make a tackle in football **OR** running **AND** passing a football **OR** use hands **AND** eyes to catch the ball in cricket **OR** putting a racket in the right place to hit the ball	1 (1 × AO2)	**Answers must be applied to a <u>named skill</u> in sport AND describe an example of coordination** Definitions of coordination: • moving different limbs at the same time • using different body parts together accurately • doing more than one task at a time effectively • making a decision and putting it into action • repeating a sequence of movements fluently If named position in game but no sport (e.g. goalkeeper) and correct description of example (e.g. diving) = BOD **Do not accept** skill/sport named on its own, e.g. pass in football. Use both feet to score in football = TV <u>Examiner's Comments</u> Most candidates identified coordination as the fitness component measured by the wall throw test. The second part of the question proved more challenging. Answers were required to show an understanding of coordination and apply their knowledge to a sporting example of their choice. Responses that only named a skill, for example catching a cricket ball, did not show the importance of coordination in the performance of this skill. **Assessment for learning** Centres are encouraged to challenge candidates to explain each of the components of fitness and apply them to a range of sport skills. Questions should focus on how each fitness component enables the skill to be performed successfully. This knowledge is required in the 'analysis' section of the AEP and should be reinforced to strengthen exam technique

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Question			Answer/Indicative content	Marks	Guidance
			Total	2	
3			One mark for: False	1 (1 × AO2)	
			Total	1	

Question			Answer/Indicative content	Marks	Guidance
4	a		One mark for: 	1 (1 × AO1)	Axis must pass through centre of body and match the direction that the arms are pointing on fig. 1 Arrowheads not required Horizontal line = BOD If more than 1 line and it is unclear which line the candidate wants you to mark = TV <u>Examiner's Comments</u> Many responses recognised that the black dot represented the centre of the body. Correct lines should mirror the direction of the arms. Horizontal lines were given the benefit of the doubt. Some candidates gave additional information to support their answers such as 'hip to hip' or 'side to side'. These additional comments are helpful to show understanding.
	b		One mark for: Somersault **OR** forward/backward roll **OR** kicking a ball **OR** front/back flip **OR** chest pass	1 (1 × AO3)	**Accept** any correct movements that involve flexion/extension **Do not accept** named sports, e.g., gymnastics **OR** practical examples that include movements around **other axes**, e.g. golf swing, tennis shots, bowling in cricket = TV 'flip' on its own = TV <u>Examiner's Comments</u> This was generally well answered. Candidates are encouraged to use practical examples in which the whole body moves around the relevant axis of rotation. Some examples have movements of limbs around different axes. If one of these examples are used, candidates are required to state the specific joint or limb to clarify which movement they are using to support their answer.
			Total	2	

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Question			Answer/Indicative content	Marks	Guidance
5	a		One mark for: Fig. 2	1 (1 × AO1)	Diaphragm must appear flat/almost flat. Ovals/circular shapes = BOD if flattish There should be space between diaphragm and lungs (as in picture) **Do not accept** a diaphragm that appears to be in a dome shape (question states inhalation) Use of arrows = TV (unless drawn image is correct) Examiner's Comments During inhalation the diaphragm flattens. Diagrams needed to show a flat, or almost flat, line to represent this. Answers showing a domed shape with a downward arrow did not gain credit as the domed shape is a feature of expiration.
	b		One mark for: Relaxes **OR** goes into a dome shape / domes **OR** move upwards	1 (1 × AO1)	**Do not accept** relaxes and goes down (contradictory) = TV Examiner's Comments Many responses stated that the diaphragm relaxes during exhalation. Some answers gave contradictory responses, such as the diaphragm contracts and domes or the relaxes and moves down. These contradictory answers do not gain credit.
			Total	2	
6			One mark for: **Pulmonary** (artery)	1 (1 × AO1)	Examiner's Comments This question was generally well answered. However, some candidates did not appear to read the full question as answers given included veins or the vena cava.
			Total	1	

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Question			Answer/Indicative content	Marks	Guidance
7			One mark for: Latissimus dorsi	1 (1 × AO1)	**Accept** phonetic spellings of latissimus dorsi **Do not accept:** Lats = TV <u>Examiner's Comments</u> Centres are reminded that the correct names of muscles are listed in the specification. Shortened versions, such as lats, are not credited. Phonetic spellings of the full name of the muscle are accepted.
			Total	1	
8			One mark for: Advertising boards / fencing / litter / goalposts / other players / weather / poor lighting / inappropriate footwear / lack of supervision / damaged equipment	1 (1 × AO1)	Mark first response only **Accept** other suitable hazards Loose / left out equipment = BOD **Do not accept** references to pitch / surface / ground / floor, e.g., surface is wet or slippery (in question)
			Total	1	

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Question			Answer/Indicative content	Marks	Guidance
9			Two marks for explanation (one mark for feature of footwear and one mark for how this feature reduces risk of injury): 1. (feature) surface of sole/studs/spikes (how risk is reduced) reduce slipping / gives more grip 2. (feature) sturdy sides of footwear / high tops / lace ups (how risk is reduced) help prevent **ankle / foot** injuries 3. (feature) (gel/cushioned) insoles / bubbles / air pockets / arches (how risk is reduced) cushion feet / knees **OR** act as shock absorbers for the feet / knees 4. (feature) correct-fitting shoes (how risk is reduced) reduce risk of blisters	2 (2 × AO2)	Types of footwear include (no mark for type): Trainers / football boots / astros / rock climbing shoes / tennis shoes / basketball shoes 'Gripped tennis shoes' = BOD 1 <u>Examiner's Comments</u> Most answers explained how the studs on the soles of football boots give more grip. Responses needed to identify a specific feature of a type of sports footwear to explain how this feature reduced the risk of injury. Candidates are reminded that injuries cannot be prevented. This section of the syllabus is focused on minimising risk.
			Total	2	
10			One mark for: **(A)** The clavicle is an articulating bone at the shoulder when serving in tennis	1 (1 × AO3)	
			Total	1	

Question			Answer/Indicative content	Marks	Guidance
11			One mark for: (Intercostal muscles) relax **OR** allow ribs/rib cage to move down/in **OR** Pull ribs down/in'	1 (1 × AO1)	**Accept** Contract to move ribs inwards' = BOD **Do not accept** lungs relax **OR** ribs relax **OR** relax and contract 'They move down to release pressure' = TV Examiner's Comments The syllabus does not differentiate between the external intercostals and the internal intercostals, so a simple statement saying the intercostal muscles relax gained credit as correct. Candidates who correctly described the role of the internal intercostals were also given credit. However, answers that were contradictory because the movement of the ribs was not matched by the action of the muscles did not gain credit.
			Total	1	

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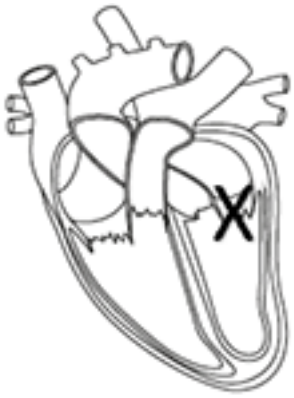
Question			Answer/Indicative content	Marks	Guidance
12	a		One mark for:  Fig. 4	1 (1 × AO1)	Note: bicuspid valve lies between the left atrium and left ventricle **Do not accept** X between left ventricle and aorta as this is the aortic pulmonary valve Look for very small X somewhere on heart before giving NR <u>Examiner's Comments</u> Many responses showed with an X the correct location of the bicuspid valve. Some candidates chose to use an arrow pointing to the correct spot and linked to an X. This was an acceptable format. **Assessment for learning** Centres are reminded that images of the heart appear in reverse, so that the right side of the image is actually the left side of the heart, and vice versa. Many candidates annotate images of the heart on the paper to avoid any confusion and often draw lines indicating the direction of blood through the heart. This helps their understanding of the roles of the structures of the heart and minimises the risk of errors.
	b		One mark for: **Left** atrium	1 (1 × AO2)	**Do not accept** Atrium on its own
			Total	2	

Question			Answer/Indicative content	Marks	Guidance
13	a		One mark for: **Longitudinal**	1 (1 × AO3)	
	b		One mark for: **Transverse**	1 (1 × AO3)	
			Total	2	
14	a		Two marks for (in any order): **1. Triceps** **2. Biceps**	2 (2 × AO2)	<u>Examiner's Comments</u> It has been recognised that various texts and on-line resources give opposing answers for this question depending on their definitions of agonist and antagonist. Therefore, biceps and triceps were both credited as agonist, with the opposing muscle gaining credit as antagonist.
	b		One mark for: **Extension**	1 (1 × AO3)	<u>Examiner's Comments</u> Well answered by most candidates.
			Total	3	
15			One mark for: **Tibia**	1 (1 × AO1)	**Do not accept** Tibula, fibia, shin bone **Accept** phonetic spellings of tibia <u>Examiner's Comments</u> Most candidates correctly identified the tibia. Other named bones in the leg were not credited. Some candidates wrote 'fibia'. This spelling is not accepted as it appears that candidates are hedging their bets as to the correct name.
			Total	1	
16			One mark for: **(B)** 20m	1 (1 × AO1)	
			Total	1	

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Question			Answer/Indicative content	Marks	Guidance
17	a		One mark for: **(D)** Femur	1 (1 × AO1)	
	b		One mark for: Acts as a shock absorber **OR** cushions impact **OR** softens landing **OR** support the joint **OR** allows (some) flexibility at the joint **OR aids** movement at the joint **OR** helps to connect bones (at cartilaginous joints) **OR** keeps airways / nostrils open	1 (1 × AO2)	**Do not accept** protecting bones or friction or equivalent (e.g., wear and tear) (in question) **OR** one-word answers, e.g., support (explanation needed) Connects bones and muscles together = TV Prevents dislocation = TV
			Total	2	

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Question			Answer/Indicative content	Marks	Guidance
18			Two marks for: (Mobility) e.g. arm swings **OR** hip circles **OR** ankle rotations **OR** open / close the gate **OR** heel flicks **OR** high knees **OR** lunges (Dynamic movement) e.g. shuttle runs / zig zag runs / running in and out of cones	2 (2 × AO2)	Dynamic movement must suggest speed **and** changes of direction **Accept** other suitable warm up exercises if in the correct context Agility runs = BOD **Do not accept** Agility ladders on its own = TV Examiner's Comments Many candidates gave a valid example for the mobility component of a warm up. More successful responses showed an understanding that dynamic movement involves speed and changes of direction in this part of the warm up. Some candidates named agility ladders for dynamic movement. Ladders are a piece of equipment that can be used but are not a practical example of an exercise. Misconception There is a misconception that dynamic movement in a warm up involves dynamic stretching. Candidates must be taught that dynamic stretching is used in the mobility component of the warm up. Exercises, such as shuttle sprints, that involve speed and changes of direction are used in the dynamic movement section.
			Total	2	
19			One mark for: **True**	1 (1 × AO1)	
			Total	1	

Question			Answer/Indicative content	Marks	Guidance
20			One mark for: (C) 5600ml	1 (1 × AO3)	
			Total	1	

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Question			Answer/Indicative content	Marks	Guidance
21	a	i	One mark for: **Noah**	1 (1 × AO3)	
		ii	One mark for: **Mia**	1 (1 × AO3)	
		iii	One mark for: **Mia**	1 (1 × AO3)	<u>Examiner's Comments</u> This was generally well answered. A few candidates mistook Harry for the participant who had made the greatest increase in muscle hypertrophy as he had the largest biceps. However, his increase was 2cms less than Noah's.

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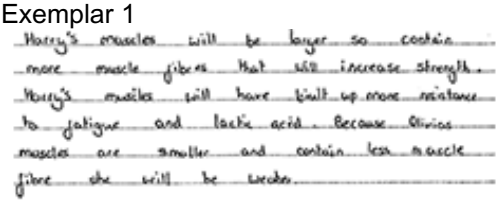
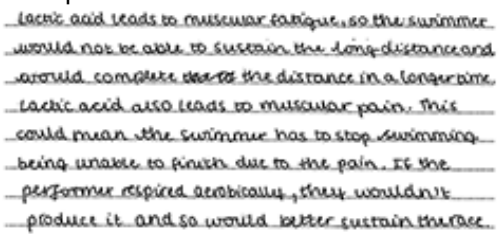
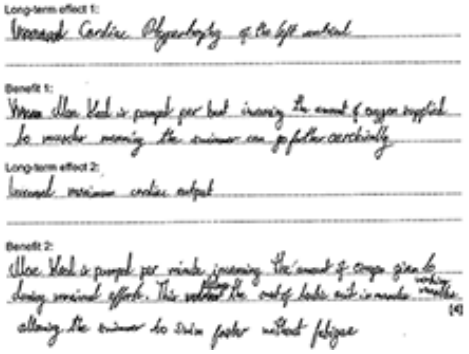
Question			Answer/Indicative content	Marks	Guidance
	b		Three marks from three of: 1. Increased muscle **mass OR** Increased size of muscle **fibres OR** more muscle **fibres** 2. greater speed (of contraction) 3. greater muscular endurance **OR** able to work for longer **OR** less prone to fatigue **OR** train for longer 4. greater flexibility **OR** able to stretch further **OR** increased elasticity 5. greater tolerance to lactic acid 6. faster rate of removal of lactic acid 7. greater potential for energy production 8. larger size / number **of mitochondria** 9. Increased stores of glycogen / PC 10. more capillaries / more oxygen / more blood (to muscles) 11. less prone to injury / faster recovery from injury / quicker recovery rate / repair faster	3 (3 × AO3)	If candidate writes 'Olivia has less strength because …' then credit opposites of 1-11 Reduced build-up of lactic acid = BOD 6 Prevent build-up of lactic acid = TV **Do not accept** Muscular hypertrophy **OR** muscles get bigger/grow **OR** increase in strength/force/power Examiner's Comments The best responses identified long-term benefits of training on the muscular system and explained how these benefits would lead to greater strength. Many candidates struggled to understand what was required and their answers were limited to basic descriptions making a link between muscle size and strength. Exemplar 1  Harry's muscles will be larger so contain more muscle fibres that will increase strength. Harry's muscles will have built up more resistance to fatigue and lactic acid. Because Olivias muscles are smaller and contain less muscle fibre she will be weaker. This response explains that there are more muscle fibres (1) in Harry's muscles and this leads to hypertrophy of muscle. The answer points out that Harry's muscles will be stronger than Olivia's because they are more resistant to fatigue (1) and more resistant to lactic acid (1). The response gives three long-term benefits and these are linked to Harry's greater strength. It scores 3 marks.
	c	i	Three marks for: (The elbow during a biceps curl) = 3rd (class) (The neck when heading a ball) = 1st (class) (The take-off foot in the long jump) = 2nd (class)	3 (3 × AO3)	**Accept** 'class 3', etc. Number on its own as BOD
		ii	One mark for: **True**	1 (1 × AO1)	
			Total	**10**	

Question			Answer/Indicative content	Marks	Guidance
22	a	i	One mark for: Nose - bronchi – bronchiole **OR** A = nose **AND** B = bronchi **AND** C = bronchiole	1 (1 × AO1)	One tick ONLY by (C) bronchiole for all 3 in correct order otherwise no marks Examiner's Comments Most candidates placed the features of the lungs in the correct order. Some candidates placed the bronchioles before the bronchi. A few candidates did not read the options carefully enough and put the mouth for A.
		ii	Two marks for two of: 1. Allows gaseous exchange / diffusion into blood 2. **Oxygen** / carbon dioxide diffuses 3. **Oxygen** diffuses / into blood / capillaries 4. **Carbon dioxide** from blood / capillaries **OR carbon dioxide** into alveoli	2 (2 × AO1)	**Do not accept** air enters alveoli (in question) Examiner's Comments This was a well answered question. Most candidates stated that the alveoli are the site of gaseous exchange where oxygen diffuses into the blood and carbon dioxide diffuses from the blood into the alveoli.
	b		Three marks for three of: 1. Causes pain / soreness / discomfort / aches 2. (Lack of oxygen) Causes **fatigue** (in the muscles) 3. Leads to a poorer swimming technique / reduced quality **OR** decreased performance **OR** muscles do not move as freely 4. Causes the performer to slow down / reduce speed / stop	3 (3 × AO2)	Fatigue on its own = ✓ (muscles implied as mentioned in question) Tiredness / tiring on its own = BOD 2 unable to maintain intensity = BOD 3 less effective / efficient = BOD 3 **Do not accept** causes cramp **OR** references to recovery Affects swimmer's performance = TV Causes oxygen debt = TV Delayed onset muscle soreness = TV Stiffness / weakens muscles = TV Examiner's Comments More successful responses gave clear explanations of the impact of lactic acid on the muscles and effect of this on the quality of a swimmer's performance. Some candidates did not apply their answers to a swimmer. **Misconception** A common misconception is that lactic acid causes cramp. A second misconception is that lactic acid causes

Question	Answer/Indicative content	Marks	Guidance
			delayed onset muscle soreness (DOMS). Neither of these are true. Nor does it prevent you from using muscles. Muscles become fatigued but can still work at a lower intensity. Lactic acid is removed from the muscles after exercise in approximately one hour depending on the type of cool down. Exemplar 2  lactic acid leads to muscular fatigue, so the swimmer would not be able to sustain the long-distance and would complete ~~does~~ the distance in a longer time. Lactic acid also leads to muscular pain. This could mean the swimmer has to stop swimming, being unable to finish due to the pain. If the performer respired aerobically, they wouldn't produce it and so would better sustain the race. This response explained that lactic acid leads to muscular fatigue (1) which means that they would complete the distance in a longer time (1). They also say that lactic acid leads to muscular pain (1). This scores 3 marks.
c	Four marks for four of: (long-term **effects** on cardiovascular system (sub-max. 2 marks) 1. Lower **resting** heart rate **OR** bradycardia 2. The heart becomes larger **OR** hypertrophy of the heart 3. The heart becomes stronger **OR** stronger contractions of heart 4. Increase in stroke volume **OR** more blood pumped from the heart in one beat 5. Increase in cardiac output **OR** more blood ejected from left ventricle in one minute 6. (Increased) capillarization 7. More efficient vascular shunt mechanism 8. Lower blood pressure 9. Increase in red blood cells 10. Decrease in blood viscosity (**benefits** for a long-distance swimmer (sub-max. 2 marks) Increased stamina / cardiovascular endurance / VO2 max / swim for longer — valid for all effects	4 (2 × AO1) (2 × AO2)	Benefit must be specific to the long-term effect to gain credit (see table). **Do not accept effects** listed as **benefits**. If effect would not get a mark **do not** credit benefit. The same benefit may apply to two different effects. **Accept**: benefits as effects. The explanation must be **different** but can be part of the same MP E.g., Effect - increased stamina, benefit - swim for longer = 2 marks (both MP 11) (Cardiovascular) hypertrophy = BOD 2 Less likely to fatigue = BOD 11 **Do not accept** long-term effects on skeletal, muscular or respiratory systems Lower heart rate = TV Faster speed of blood to muscles = TV <u>Examiner's Comments</u> More successful responses described two

Question	Answer/Indicative content		Marks	Guidance
	Reduces how hard the heart must work **OR** heart rate returns to rest quicker after exercise	valid for all effects		long-term effects of training on the cardiovascular system. In most cases they were able to explain how each effect benefited a long-distance swimmer. If a benefit for the cardiovascular system was described as an effect it was given credit. Furthermore, if the explanation was correct extra credit was given. However, because of the nature of the question, if the effect was not correct no credit could be given for explaining how that effect could benefit a swimmer. Some candidates did not read the question carefully and this was reflected in effects that were linked to the muscular system or the respiratory system, not the cardiovascular system. Exemplar 3  Long-term effect 1: Increased Cardiac Hypertrophy of the left ventricle Benefit 1: More Max Vol is pumped per beat increasing the amount of oxygen supplied to muscles meaning the swimmer can perform aerobically Long-term effect 2: Increased maximum cardiac output Benefit 2: Max Vol is pumped per minute increasing the amount of oxygen given to during maximal effort. This reduces the risk of lactic acid in muscles causing the swimmer to swim faster without fatigue [4] This response has two correct long-term effects and explains the benefit of each for a swimmer. The first long-term effect is cardiac hypertrophy (1) and the benefit is an increased amount of oxygen to muscles (1). The second long-term effect is an increased maximum cardiac output (1) and the benefit is to swim faster without fatigue (1). A total of 4 marks.
		More oxygen / (oxygenated) blood to (working) muscles / heart **OR** Increased efficiency of blood to working muscles **OR** faster removal of waste products (from muscles)	valid for 2, 3, 4, 5, 6, 7, 9, 10	
		reduced risk of CHD	valid for 1, 2, 3, 4, 5, 8, 10	
	Total		**10**	

Question			Answer/Indicative content	Marks	Guidance
23	a		Four marks for: 1. Warm / waterproof / outdoor **clothing OR** clothing that prevents heatstroke / sunburn 2. Warm up **OR** cool down 3. Make sure you are fit enough **OR** have good techniques to play football **OR** same weight / age / gender categories 4. Lifting / using equipment safely **OR** use **correct** techniques **OR** trainer / coach / spotter **being present**	4 (2 × AO1) (2 × AO2)	**Accept** other suitable practical examples for MP 1 and 3 but answers must show how they **minimise the risk of injury** Running shorts reduce blisters / friction = BOD 1 Do a risk assessment = BOD 4 **Do not accept** footwear / protective equipment / wear running shorts / avoid baggy clothing = TV 1 Having a coach / supervision / appropriate equipment / exercise = TV 4 <u>Examiner's Comments</u> Only the strongest candidates were able to give a practical example of correct clothing that showed how the risk of injury was minimised. Many responses described the use of items of equipment or footwear. These answers do not relate to clothing so gain no credit. Most responses correctly gave a warm up or cool down as the answer to 2. Practical examples for appropriate level of activity generally referred to training with others of the same age group. Other acceptable answers talked about sparring with opponents of the same weight or ability. Correct answers for 4 described using correct techniques, lifting safely, or having spotters or a coach present during the training session. Less successful responses tended to repeat the words in the corresponding boxes or gave limited answers that did not show knowledge and understanding of minimising risk.

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Question			Answer/Indicative content	Marks	Guidance
	b		Indicative content: Types of training for AO1 (award from bullets) and AO2 (award from e.g.) 1. Circuit training • Series of exercises or stations arranged in a particular order • (stations / exercises) target different muscle groups • Involves sets / repetitions and periods of rest • Can use the body as resistance or use of weights (e.g.) 30 seconds work and 30 seconds rest, press up to sit up or sport related activities 2. Weight training • Involves lifting of free weights / machines or pulleys • Involves sets / repetitions and periods of rest • High resistance AND low reps for strength • lower resistance AND more reps for endurance / speed (e.g.) leg press, bench press or 3 sets of 10 reps 3. Plyometrics • Involves muscles work concentrically AND eccentrically • Involves stretching AND contracting muscles • Involves sets / repetitions and periods of rest (e.g.) bounding, hopping, jumping (on and off boxes), depth jumping 4. HIIT / High Intensity Interval Training / Interval training • The higher the intensity the shorter the work period • Repeated periods of high intensity work and recovery periods • Recovery period is equal or longer than the work interval (e.g.) sprinting / cycling for short bursts for 30 seconds 5. Continuous training	6 marks in total (2 × AO1), (2 × AO2), (2 × AO3)	Level 3 (5–6 marks) • detailed knowledge & understanding • clear and consistent practical application of knowledge & understanding • effective analysis/evaluation and/or discussion/explanation/development • relevant information drawn upon from other areas of the specification • accurate use of technical and specialist vocabulary • there is a well-developed line of reasoning which is clear and logically structured. The information presented is relevant and substantiated. Level 2 (3–4 marks) • satisfactory knowledge & understanding • some success in practical application of knowledge & understanding • analysis/ evaluation and/or discussion/explanation/development attempted with some success • some relevant information drawn from other areas of the specification • technical and specialist vocabulary used with some accuracy • there is a line of reasoning presented with some structure. The information presented is in the most-part relevant and supported by some evidence. Level 1 (1–2 marks) • basic knowledge & understanding • little or no attempt at practical application of knowledge & understanding • little or no attempt to analyse/ evaluate and/or discuss/explain/develop • little or no relevant information drawn from other areas of the specification • technical and specialist vocabulary used with limited success • the information is basic and communicated in an unstructured way. The information is supported by limited evidence and the relationship to the evidence may not be clear. (0 marks)

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Question	Answer/Indicative content	Marks	Guidance
	• Steady-state training OR training with no changes of intensity • Low – moderate intensity level OR aerobic exercise (e.g.) running / swimming / cycling for more than 20 minutes 6.Fartlek training / speed play • Continuous / steady state / aerobic exercise AND higher intensity bursts • Over different surfaces / gradients / up and down hill (e.g.) road / hill running / jogging with fast sprints <u>Social factors for AO3</u> <u>(award from bullets)</u> 7. Education • schools teach benefits of physical fitness • opportunities in schools / shared facilities / community use 8. Self-esteem / self-confidence • High self-esteem encourages participation and to try new training methods • Less worried about body image / making mistakes 9. Media coverage / role models • More role models / media coverage for benefits of training 10. Family / friends / peers • Encouraged by family / friends who are members of fitness clubs • Loneliness / wanting to meet people may encourage joining a gym 11. Age • Importance of fitness for all ages • Older people may have more opportunities to take part 12. Gender • Single-sex sessions encourage participation • Lots of opportunities for males OR		• no response or no response worthy of credit. Highlight type of training and social factors Annotate best 2 types of training ONLY with KU, EG and DEV AO1 = KU = bullets; AO2 = EG = examples; AO3 are stated = DEV Social factors must be explained in terms of encouraging participation. Do not credit opposites Level 3 Discriminators • detailed knowledge & understanding two types of training (AO1 / AO2) • several social factors that can encourage participation are explained and applied to training (AO3) • both types of training and social factors that encourage participation are well covered for Level 3; some imbalance between the two may be present for 5 marks. At 6 marks, both are equally well addressed. Level 2 Discriminators • satisfactory knowledge & understanding two types of training (AO1/ AO2) • social factors that can encourage participation may be explained (AO3) • There may be some attempt to apply social factors to training (AO2) • some success at more developed AO2 and/or AO3 points moves the response into Level 2 (AO2 or AO3 would be 3 marks; both attempted with some success = 4 marks) Level 1 Discriminators • basic knowledge & understanding of types of training (AO1 / AO2) • social factor(s) that can encourage participation may be identified with little development (AO3) • the information is basic and communicated in an unstructured way • responses only demonstrating AO1 knowledge and understanding are Level 1 <u>Examiner's Comments</u>

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Question			Answer/Indicative content	Marks	Guidance
			focus on increasing opportunities for females OR more female sports teams / leagues 13. Time / work commitments / opportunity / access • Having enough free time to train regularly • More flexible working hours 15. Cost / disposable income • Having enough money means increased opportunity to participate • reduced joining fees are available for some groups 16. Disability / discrimination / religion / culture • Improved access / opportunity / esteem		This question is the extended response question and the synoptic element is to explain how social factors can encourage participation in training programmes. The best answers showed a degree of planning and this was reflected in clear descriptions of two types of training and a range of social factors. Many responses contained significant amounts of irrelevant information. Much of this involved evaluating the effectiveness of each type of training. This extra knowledge has not been asked for and is therefore given no credit. Candidates are reminded to focus on the command word in the question. Some responses described how training could develop social skills. This did not answer the question, however, if the answer was developed to show that these new social skills could encourage continued participation credit was given. Answers that explained how social factors may discourage participation did not answer the question.
			Total	10	

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