

Mark Scheme (Results)

Summer 2012

GCSE Physical Education (5PE01) Unit 1: The Theory of Physical Education

Edexcel and BTEC Qualifications

Edexcel and BTEC qualifications come from Pearson, the world's leading learning company. We provide a wide range of qualifications including academic, vocational, occupational and specific programmes for employers. For further information, please visit our website at www.edexcel.com.

Our website subject pages hold useful resources, support material and live feeds from our subject advisors giving you access to a portal of information. If you have any subject specific questions about this specification that require the help of a subject specialist, you may find our Ask The Expert email service helpful.

www.edexcel.com/contactus

Pearson: helping people progress, everywhere

Our aim is to help everyone progress in their lives through education. We believe in every kind of learning, for all kinds of people, wherever they are in the world. We've been involved in education for over 150 years, and by working across 70 countries, in 100 languages, we have built an international reputation for our commitment to high standards and raising achievement through innovation in education. Find out more about how we can help you and your students at: www.pearson.com/uk

Summer 2012
Publications Code UG032756
All the material in this publication is copyright
© Pearson Education Ltd 2012

Question	Answer	Mark
Number		
1a	Q - a physical and mental benefit of a healthy, active lifestyle	(1)
	C – (Physical challenge)	

Question	Answer	Mark
Number		
1b	Q - a socio-economic key influence that can impact on achieving sustained involvement in physical activity D – (Cost)	(1)

Question	Answer	Mark
Number		
1c	Q - would be most important to a rower 8 minutes into a 12 minute race	
	B - (Muscular endurance)	(1)

Question	Answer	Mark
Number		
1d	Q - Which of the following statements is false?	
	A - (The components of the FITT principle are Frequency,	
	Interval, Time, Type)	(1)

Answer	Mark
Q - Which of the following statements is true?	
D – (Blood shunting is the term used to describe the redistribution of blood during exercise)	(1)
	Q - Which of the following statements is true? D - (Blood shunting is the term used to describe the

Question Number	Answer	Mark
1f	Q - categories performance-enhancing drug is a competitive endurance cyclist most likely to take despite the potential health risks	
	B - (Peptide Hormones (Erythropietin/EPO))	(1)

Question Number	Answer	Mark
1g	Q - Which of the following statements correctly defines the term cardiac output?	
	C - (Cardiac output = HR X SV)	(1)

Question Number	Answer	Mark
1h	Q - Which of the following statements accurately explains an effect of smoking on the respiratory system?	
	C – (If a performer is a heavy smoker it will slow their recovery whatever event they compete in)	(1)

Question Number	Answer	Mark
1i	Q - Which of the following statements correctly explains the term isometric?	
	 A – (An isometric muscle contraction does not result in movement) 	(1)

Question Number	Answer	Mark
1j	Q - Which of the following is a true statement? A - (Flexion, extension and abduction are all possible at	
	the shoulder)	(1)
	Total for Question 1	10

Qu	estion	Answer		Additional Guidance	Marks	Total
		Description of benefit	Category of benefit			
2	In que Walk ra Descrip Accept e.g. cou overwe OR Accept e.g. inc OR increas OR	other than bus otion specific relevant health benefit, uld lead to <u>weight loss if</u>	If first column blank no credit for classification. Physical (1) (if matches description)	one word or vague answers e.g. improves health; improves fitness; improves body shape; improves body composition Do not accept Cardiovascular system	1 x 2	2
	In que Play spo Descrip	ort as break from revision	Mental (1) (if matches description)	Do not accept mental break; Psychological; relax; mind off troubles.	1 x 2	2
	Descrip A chand To mak To mee	own now run in a club	Social (1) (if matches description) OR Mental (1) (if matches description)	Do not accept socialise in column 2 Competition cooperation	1 x 2	2
		(.)		Total for Que	estion 2	6

Questio	n Answer	Do not accept	Additional Guidance	Marks	Total
3	Any three of the following components from: Power Speed Balance Coordination 	Anything else	Accept - Phonetic spelling: Responses in any order: FIRST response per line.	3 X 1	3
	Total for Question 3				3

Qu	estion	Answer	Do not accept	Additional Guidance	Marks	Total
4 a	Tuesday	y	Monday any other day of the week	Accept Tues	1 x 1	1
b	1. Bala mac wate OR Bala carb vitar	anation that makes reference four of the following: Inced diet should include ronutrients; micronutrients; er and fibre nced diet should include fats; ohydrates; proteins; mins; minerals; water; fibre (1	Do not accept carbs in place of carbohydrates	must be more than simple list for full credit, however, if list is given, provided contains all elements can gain point 1 Point 2: Accept reference to relative size of		
	micr OR Optii OR	ronutrients and ronutrients mal ratio of nutrients ect amounts of nutrients (1		proportions e.g. correct percentage of nutrients e.g. fats should form smaller part of diet than carbohydrates (1)		
	OR Fats	ronutrients for energy OR Carbohydrates for energy tein for growth and repair (1	of	Point 4 accept specific example of vitamin or mineral and effect e.g.		
	body OR Vita	onutrients for maintaining y health amins OR Minerals for ntaining body health (1	Do not accept	vitamin D stronger bones Point 5 accept reference to replacing lost fluids	4 X 1	4
		er to avoid dehydration Fibre to aid/help digestion (1	fluid or liquid	due to exercise. Accept chemical equiv for water (H ₂ O)		
<u> </u>				Total for Que	.3tiUil 4	5

Qu	est	ion	Answer	Do not	Additional	Marks	Total
				accept	Guidance		
5	а		Ectomorph			1 x 1	1
	b		A description that makes reference to:		Accept alternative		
			Tall and thin ORThin ORnarrow shoulders OR	Tall on own	descriptions of thin, e.g. lean/slim/skinny		
			 narrow hips OR long limbs OR not much body fat or visible muscle 	Narrow waist		1 x 1	1
	С	i	 One advantage from: Lighter therefore easier to lift body weight over bar 	Answers not related to pole vault	Needs to be clear why advantage, would expect 'both' aspects of answer	1 x 1	1
			Lighter therefore can vault higher				
	С	ii	One advantage from: • Longer stride length	Answers not related to LDR Longer legs so	Needs to be clear why advantage, would expect 'both' aspects of answer		
			therefore covers ground quicker OR Lighter therefore can	Not: less		1 x 1	1
			run faster as less weight to carry	weight so run further			

Qu	Question		Answer	Do not accept	Additional Guidance	Marks	Total
5	d		 Any two factors from: Height Sex OR Gender Bone structure OR bone density Muscle mass OR muscle size OR muscle girth (allow body composition) 	Diet Training Age Body shape Size Body type Muscle density	Do not accept genetics unless qualified in relation to height; bone density accept bone size/how tall	2 x 1	2
					Total for Que	estion 5	6

Que	estion	Answer	Do not accept	Additional Guidance	Mark	Total
6	i	A description based on the impact of diet that makes reference to: IF POOR DIET: 1. can lead to an increase in cholesterol (1) 2. This causes a narrowing of the arteries OR an increase in blood pressure (1) 3. increasing risk of CHD OR stroke (1) IF GOOD DIET: 4. contains correct minerals, e.g. iron (1) 5. This increases haemoglobin (1) 6. Therefore less chance of anaemia (1)	May answer from good or bad diet perspective but NOT a mix. I.e. points 1 – 3 OR points 4 – 6	Accept Point 1: fatty deposits or Triglycerides or saturated fats or bad cholesterol or LDL in place of cholesterol Point 2: Clogs/blocks arteries Point 3: Accept heart attack	3X1	3
	ii	A description based on the impact of rest that makes reference to: 1. Rest required for adaptation of heart to take place OR need rest for cardiac hypertrophy to take place (1) 2. Rest required for heart rate to recover to resting level OR Recovery heart rate slowly returns to resting heart rate(1)	Point 1 Make changes; For heart to get bigger/ stronger Point 2 For recovery; for heart to get back to normal	Point 1: Accept examples of other relevant training adaptations Point 2 Must state resting HR	2 x 1	2
				Total for Que	estion 6	5

Qu	estion	Answer	Do not	Additional	Marks	Total
			accept	Guidance		
7	(i)	Immediate		Accept:		
	(ii)	Immediate		Phonetic spelling		
	(iii)	Long term			3x1	3
				Total for Que	estion 7	3

Qu	ıest	ion	Answer	Do not accept	Additional Guidance	Marks	Total
8	а		Anaerobic	Aerobic	Accept the answer with or without 'respiration' or within statement	1 x 1	1
	b		Any one of:	When resting During exercise	Accept Stopped working During rest period	1 x 1	1
	С	i	Any one example from:	Example if not clearly anaerobic period At end of race	Must imply/state maximal intensity e.g. accelerating past other runners	1 x 1	1
	С	ii	Any one example from: • Hard rally OR • sprinting in a rally to get the ball	Example if not clearly anaerobic or vague e.g. long rally/game	Must imply/state maximal intensity over time	1 x 1	1
	С	iii	Any one example from: • <u>series</u> of powerful explosive punches OR • Throwing a lot of hard punches	Example if not clearly anaerobic AND sustained (i.e. not just single anaerobic action)	Must imply/state maximal intensity over time	1 x 1	1
	•	•			Total for Q	uestion 8	5

Qu	ıest	ion	Answer	Do not accept	Additional Guidance	Marks	Total
9	а		Tricep		Accept Triceps	1 x 1	1
					Only accept first answer for each response.		
					Accept phonetic spelling		
	b		Quadriceps	Quads	Only accept first answer for each response.	1 x 1	1
					Accept phonetic spelling		
	С		Deltoid		Only accept first answer for each response.	1 x 1	1
					Accept phonetic spelling		
	d		Gastrocnemius		Soleus Only accept first answer for each response.	1 x 1	1
					Accept phonetic spelling Total for O	uestion 9	4

Function of the skeletal system during physical activity	Example of use during a basketball game	
Accept	Accept	
Movement (1)	Any relevant court movement e.g. dribbling the ball towards the basket (1)	
Do not accept	Do not accept Example not linked to basketball e.g. running	
Accept Support OR shape OR structure (1)	Accept Any movement or technique requiring upright position e.g. when pivoting with ball OR when taking a set shot.	
Do not accept Stability	Do not accept Example not linked to basketball	
Accept Protection (1)	Accept Prevents damage to (vital) organs during play if collision with others OR protects brain if ball strikes the head (1)	
Do not accept	Do not accept Example not linked to basketball	
activity In the first column - Accept any of the credit for column one no many of the column one in th	s question references during physical order	less
		(6)
	Accept Movement (1) Do not accept Accept Support OR shape OR structure (1) Do not accept Stability Accept Protection (1) Do not accept Stability Accept Protection (1)	Accept Accept Any relevant court movement e.g. dribbling the ball towards the basket (1) Do not accept Example not linked to basketball e.g. running Accept Support OR shape OR structure (1) Do not accept Example not linked to basketball e.g. running Accept Any movement or technique requiring upright position e.g. when pivoting with ball OR when taking a set shot. Do not accept Example not linked to basketball Accept Protection (1) Prevents damage to (vital) organs during play if collision with others OR protects brain if ball strikes the head (1) Do not accept Example not linked to basketball Marking guidance Do not accept blood production as question references during physical activity In the first column - Accept any order If no credit for column one no mark for column two (except stability unit

Que	estic	n Answer	Do not	Additional	Marks	Total
11	а	Any three different roles in order maximum one from each p 1. Leadership OR coach leader OR captain 2. Volunteering OR spector volunteer role (e.g. faider) 3. Official OR referee O umpire OR judge	Participation Teacher Physio; Organiser Voluntary Fundraiser	Accept any specific role, e.g. manager (pt 1); Secretary (pt 2); Timekeeper (pt 3); Point 3: Accept helper if linked with role e.g. helps with organisation of the club.	3 x 1	3
	b	Any one from 1. Checking participant healthy enough to standard physical activity OR 2. To establish a baseli intensity for physica	tart goals How fit they ne of are/physical	Accept reference to safe to exercise or medical conditions	1 x 1	1
	С	Foundation	Anything else	First answer only	1 x 1	1

Que	estic	on	Answer	Do not accept	Additional Guidance	Marks	Total
11	d	ii	An explanation that makes reference to: The ability to meet the demands of the environment Two points from any one numbered row 1 Fitness can improve cholesterol health (1) (1) 2 Fitness can decrease overuse injuries health (1) immune system (1) 3 Without healthy therefore no energy to fitness will maintain fitness drop (1) Accept converse 4 Cannot increase/m aintain fitness will not fitness will migrove (1) without healthy lifestyle (1)		Point 1 accept other specific health benefits e.g. drop in blood pressure. Can achieve second listed point in row without first	1 x 1	2
11	е		Harvard step test Cooper's 12-minute run		Any order Point 2: Accept 12 min Cooper run; Cooper run	2 x 1	2

Que	stic	on	Answer	Do not accept	Additional Guidance	Marks	Total
11	f		Name: Progressive overload (1)	Other principles of training e.g. overload	Curdunice	1 1 2	2
			Explanation: To gradually increase the amount of work (so that injury does not occur) (1)	Explanation that does not imply need for gradual increase in intensity; Explanation that relies on use of word progress/ progressivel y	Accept: Gradually building up training	1 x 2	2
	g	i	Most relevant: Continuous training	Any other training method		1 x 1	
			Least relevant: Weight training (using heavy weights)	Any other training method, e.g. resistance	Accept weight training; weights	1 x 1	2
		ii	Any relevant activity/performer based on candidate selected method of training in (gi), e.g. weight lifting if weight training selected.		Activity selected in (ii) MUST relate to training method selected in (i)		
					Total for Ques	1 x 1 tion 11	1 15

Question	Answer
12	A discussion of the use of target setting to improve performance that
	makes reference to:

1. The individual principles of SMART targets: (all correctly listed = simple statement)

Specific, Measurable, Achievable, Realistic, Time-bound

2. A brief description of the individual principles of SMART:

(simple statements unless linked to examples/performance) Specific, goals clear so performer knows what they are trying to achieve

Measurable, quantifying aim

Achievable, make sure the target is realistic, i.e. it is possible for the performer to complete

Realistic, making the target challenging but not too hard Time-bound, you should have completion dates for targets

3. Examples of the application of the principles of SMART targets:

(first half simple statement; whole statement - developed)

Specific, work on weakness x to give my training appropriate focus for improvement

Measurable, improve 100m sprint time by 100th sec so clear to see when I achieve

Achievable, if I can already clear 2m setting a target of 2.1m should ultimately be achievable so motivates me to continue (must have current and future value to gauge if 'achievable')

Realistic, if I normally score 1 rounder per game increasing to 2 would be realistic, but 6 would not and would be demotivating Time-bound, I will achieve this goal by May 2012 so I check I am progressing at the right rate and alter target or set new one to continue improving

4. Makes reference to the value of the use of target setting to improve performance: (first half simple statement; whole statement - developed)

TS provides focus - so work on what is relevant leading to improvement TS allows you to measure progress so you can monitor effectiveness of training programme -and change if not getting results required TS increases motivation -so more likely to maintain training and continue to improve

TS can decrease stress on the performer as only small target or stepsfocused on in order to achieve harder long term goal

TS gives a framework to build on, progressing and setting new targets each time an old target is achieved-so you are continually working to improve

TS Can hinder if poorly set targets as they will not be achieved -and lead to demotivation/dropping out therefore drop in performance

5. Concludes value based on discussion points raised

Level	Mark	Descriptor (Question 12)
Level 0	0	No rewardable material
Level 1	1-2	i) A number of simple statements identifying the principles of SMART targets. E.g. targets should be specific; measureable; can be motivating; give you an aim
		ii) A number of simple statements identifying examples. E,g, measureable for example improve my sprint time by 1/10 th of a second
		Candidates will produce brief and narrative responses, making a limited number of simple statements, probably with limited reference to the question. Little knowledge and understanding of the principles or values of target setting. Responses produced by candidates will be mostly generalised, and may not fully address the requirement of the question to discuss the use of target setting to improve performance
		Candidates' writing communicates ideas using everyday language, but lacks clarity and organisation. There will be frequent errors in candidates' spelling, grammar and punctuation.
Level 2	3-4	 i) Developed statements, i.e. simple statements with explanation or additional information (linking principle with value). E.g. a measureable target will give the performer something to aim for so they keep trying to achieve this aim
		ii) Developed statements will provide examples from physical activity to support responses and illustrate impact on performance.
		iii) Basic (but accurate) conclusion in line with previous points.
		Candidates' responses will be mostly accurate and include relevant factual material. Some knowledge and understanding of target setting. Candidates will have addressed the requirement of the question to discuss the use of target setting to improve performance with some success. Candidates' writing communicates ideas with accurate use of appropriate terminology, and the organisation of the response shows some direction and control. There will be few errors in spelling, punctuation and grammar.

Question 12

Level 3	5-6	Developed statements (using relevant examples) balanced and succinct .
		ii) Conclusion provided based on points raised
		Candidates will offer factually accurate and sustained responses that relate well to the focus of the question and successfully addresses the discursive demands. Sound knowledge and understanding of SMART targets and their value. The discussion will be supported by accurate factual material that is relevant to the question. The value of goal setting in improving performance will be fully discussed with appropriate conclusions reached. Candidates' writing communicates ideas effectively using appropriate terminology, and organises material clearly and coherently. Spelling, punctuation and grammar will be accurate throughout the response.

Question	Answer	
13	An explanation of the how to reduce risks associated with an activity to	
	maintain health that makes reference to:	
1. Furding the parties into account as a real risks		

1. Explanation takes into account general risks:

Not healthy enough – must be explicitly stated not inferred

Not fit enough

Poor technique

NOT Somatotyping

Uneven match

Fall or trip

2. Explanation takes into account different safety measures to reduce general risk:

PAR-Q

Fitness tests to set baseline

Balance competition

NOT First Aid staff/hospital

Check facilities

Check equipment (accept in context of prior to match/activity)

Warm up

3. Explanation takes into account potential injuries linked to specific activity:

Muscle strain

Graze

Fracture

Head injury

4. Explanation takes into account different methods to reduce risk:

Wear protective clothing (accept list as simple statement)

Use of protective equipment (accept list as simple statement)

Apply specific safety rules, or relevant example of specific safety rules Safety rules for activities such as archery; throwing events; trampolining

5. Explanation clearly identifies why and how these measures reduce risk:

By warming up you are mentally prepared therefore will commit appropriately to tackles therefore less likely to mistime the tackle and become injured

Level	Mark	Descriptor
Level 0	0	No rewardable material
Level 1	1-2	i) A number of simple statements identifying or describing protective measures. E.g. in football wear shin pads to protect shin; in hockey have a ref to enforce rules
		Candidates will produce brief and narrative responses, making a limited number of simple statements, probably with limited reference to the question. Responses produced by candidates will be mostly generalised, and may not fully address the requirement of the question to explain how risks may be reduced in a specific sport.
		Candidate's writing is legible and communicates ideas using everyday language, but lacks clarity and organisation. There will be errors in candidates' spelling, grammar and punctuation.

Question 13

Questi)N 13	·
Level 2	3-4	
		i) Developed statements, i.e. simple statements with explanation or additional information (linking corrective measure to correct risk and reason how risk reduced).
		and reason how risk reduced).
		E.g. in rugby wear <u>shin pads</u> so that if kicked in the shin <u>during a tackle</u> the shin is protected by <u>padding</u> and less likely to <u>bruise or break</u>
		E.g. in rugby <u>balanced competition</u> is used to reduce risk of injury, e.g. <u>broken bones</u> , if one team is significantly older than another. By playing against people your own age; level or gender you are more likely to be a similar size and therefore less prone to injury due to imbalance.
		ii) Developed statements will provide a range of examples of risks or risk reduction measures for named activity (general and specific to activity).
		Candidates' responses will be mostly accurate and include relevant factual material. Some knowledge and understanding of risk reduction measures. Candidates will have addressed the requirement of the question to explain how to reduce risks in a specific activity with some success.
		Candidate's writing communicates with accurate use of appropriate terminology, and the organisation of the response shows direction. There will be few errors in candidates' spelling, grammar and punctuation.
Level 3	5-6	i) Developed statements (using relevant examples) balanced and/or succinct.
		ii) Conclusion provided based on points raised
		Candidates will offer factually accurate and sustained responses that relate well to the focus of the question and successfully addresses the explanatory demands. Sound knowledge and understanding of risk assessment. The discussion will be supported by accurate factual material that is relevant to the question. The strategies to reduce risk will be fully explained with appropriate conclusions reached.
		Candidate's writing communicates ideas effectively using appropriate terminology, material clearly organised. Spelling, punctuation and grammar are accurate throughout the response.

Further copies of this publication are available from Edexcel Publications, Adamsway, Mansfield, Notts, NG18 4FN

Telephone 01623 467467
Fax 01623 450481
Email <u>publication.orders@edexcel.com</u>
Order Code UG032756 Summer 2012

For more information on Edexcel qualifications, please visit our website $\underline{www.edexcel.com}$

Pearson Education Limited. Registered company number 872828 with its registered office at Edinburgh Gate, Harlow, Essex CM20 2JE





