

# Mark Scheme (Results) Summer 2007

**GCSE** 

GCSE Pysical Education(1827) Paper 01



1.	(a)	В	(1)
	(b)	С	(1)
	(c)	С	(1)
	(d)	В	(1)
	(e)	D	(1)
	(f)	D	(1)
	(g)	A	(1)
	(h)	D	(1)
	(i)	A	(1)
	(j)	D	(1)
		(Total 10	marks)
		TOTAL FOR SECTION ONE: 10	MARKS

## **SECTION TWO**

# If underlined then essential

NB Don't forget to use the forward arrow to view (iii).

(i)/(ii)				(3/
	1	co-operation/work with others/part of a team	SOCIAL	
	2	Make friends/go with current friends		
	3	competition/challenge/working at a higher level/plays to win	MENTAL	
	4	relieve stress		
	5	increase confidence/increased self esteem/feel better about themselves/ feel good		
	6	enjoyment/fun/hobby		
	7	improve performance	PHYSICAL	
	8	increase fitness/getting fitter/ keep fit/improving any stated component of health-related exercise		
	9	increase health/better health		
	10	lose weight/body shape		
		improved/look good		
	reason n FOR CAT NB3. If I column :	reasons are stated in column two (ii) ro 1 (i) still credit answer. 1 be any combination of physical/social 1 provided, ie does not need to be one fi	IVEN NO MARK ather than in	
(iii)	NB1. Ple	ase check not crediting reasons already	ı awarded in	(2)

3.	(a)	Muscular endurance.	(1)
	(b)	Strength.	(1)
	(c)	Body Composition.	(1)
		(Total 3	marks)

4.	(a)	(i)	Power.  NB. DO NOT ACCEPT: Speed.	(1)
		(ii)	Coordination.	(1)
		(iii)	<ul><li>Speed</li><li>Power.</li></ul>	(1)
		(iv)	Balance.	(1)
	(b)	(i)	The ability to <u>change</u> the position/direction/dodge/move in and out of the body <u>quickly</u> and to control the movement of the whole body (or equivalent).	(1)
		(ii)	To dodge around players/side step/movement of goal keeper to save goal (or equivalent).  Needs to be sports specific.  NB. DO NOT ACCEPT: go past an opponent/get away from opponent/ beat opponent.	(1)
		(iii)	They run in a straight line/don't change direction/need to stay in lane (or equivalent).	(1)
			(Total 7	marks)

5. (a)	(i)	<b>Overload</b> means working harder. If you lift more weights you will get stronger/making the body work harder to achieve greater results.	(1)
		NB1. There needs to be an explanation and a link between the principle and why fitness increases; it would not be enough to just say "you get stronger".	
	(ii)	<b>Moderation</b> means <u>not doing too much</u> , therefore if you stick to this principle you are less likely to <u>injure</u> yourself, therefore remain healthy/less likely to train too intensely and reduce immune system (or equivalent).	(1)
		NB1. Once again looking for explanation and link to health, not just definition.  NB2. DO NOT ACCEPT: reference to tedium/get fed up.	
		NDZ. DO NOT ACCEIT. rejerence to tealann get jed ap.	
	(iii)	Specificity makes performer train on areas of weakness/key areas in relation to their activity, therefore if these areas are improved they will be fitter for their activity, eg shot putter works on power, they will be able to throw further/equiv.	(1)
		NB1. Once again looking for explanation and link to improved performance.	
		NB2. DO NOT ACCEPT: reference to individual needs.	
(b)	They	stopped training/ were injured	(1)
		(Total 4	marks)

6.	(a)	(i)	Isometrics.	(1)
		(ii)	Weight trainings.	(1)
	(b)	(i)	Interval (training).	(1)
		(ii)	Need to work at high intensity, therefore needs intervals for recovery period to allow them to continue to work at high intensity/equivs.	(1)
			NB if (bi) is blank or incorrect no mark for (bii).	
			(Total	4 marks)

7.	(i)	<ul><li>Mesomorph.</li><li>Mesomorph.</li><li>Ectomorph.</li></ul>	(3)
	(ii)	Sprinter Is able to run fast(er) (more strength, therefore more powerful)/off the blocks with power/equiv.  NB1 DO NOT ACCEPT: reference to reaction time.	(3)
		Tennis player Is able to hit the ball hard(er), (making it harder for opponents to return) /hit the ball with power.	
		NB2 DO NOT ACCEPT: make player stronger/increase upper body strength unless qualified in terms of playing the sport.	
		High Jumper Light, therefore less weight to lift over the bar/tall so less distance to travel to clear the bar/ high(er) centre of gravity/equiv.	
		NB3 DO NOT ACCEPT: thin/tall unless qualified. NB4 DO NOT ACCEPT: reference to flexibility/jump higher on its own.	
		(Total 6	marks)

8.	(a)	(i)	Jogging.	(1)
		(ii)	Raise the pulse.	(1)
		(iii)	Stretching.	(1)
		(iv)	Elasticity.	(1)
		(v)	Skills practice.	(1)
	(b)	(i)	Rules so that equal teams for fair competition.	(1)
		(ii)	<ul> <li>Accept any of the following to a maximum of 3:</li> <li>Similar age</li> <li>Same sex</li> <li>Similar ability/grading/handicap/experience</li> <li>Similar weight.</li> </ul> NB. DO NOT ACCEPT: similar height or size/ equal numbers.	(3)
			(Total	9 marks)

9.	(a)	(i)	Fracture/dislocation/broken bone/torn cartilage.	(1)
		(ii)	Dehydration.	(1)
		(iii)	Tennis/Golfers elbow/Tendonitis.	(1)
		(iv)	Concussion.	(1)
		(v)	Hypothermia.	(1)
			NB. DO NOT ACCEPT: Hyperthermia.	
	(b)	(i)	Soft tissue.	(1)
		(ii)	<ul> <li>Rest</li> <li>Ice</li> <li>Compression</li> <li>Elevation.</li> </ul> NB. Must have all four correct to gain mark.	(1)
	(c)		e performer has no pulse/when the heart stops beating.  DO NOT ACCEPT: when a person is unconscious.	(1)
	(d)	Main	tains airway/ so they don't choke /swallow tongue/ equiv.	(1)
			DO NOT ACCEPT: when a person is unconscious unless qualified ause question asks for why).	
			(Total	9 marks

10.	(a)	(i)	A - <u>Semi-lunar valve.</u>	(1)
		(ii)	B - Left ventricle/cardiac muscle/muscle wall.	(1)
		(iii)	C - Septum.	(1)
		(iv)	D - Pulmonary Artery.	(1)
	(b)	(i)	A - Prevent the back flow of blood/allows blood to flow in only one direction/allows the blood to flow in the right direction.	(1)
		(ii)	B - Pumps blood out of the heart/ Pumps blood around the body /contracts/squeezes the ventricle/equiv.	(1)
		(iii)	C - Divides the two sides of the heart/stops oxygenated and deoxygenated blood from mixing.	(1)
		(iv)	D - Returns (deoxygenated) blood to the lungs.	(1)

(c)	(i)	C /septum - (Level of oxygen being carried by the blood to the muscles would drop if this was not fully present), so it maintains the amount of oxygen being delivered, so sufficient energy for physical work/equiv.  NB. DO NOT ACCEPT: oxygen not reaching muscles (needed to say not enough oxygen).	(1)
	(ii)	<b>D</b> /pulmonary artery - (Returns deoxygenated blood to the lungs to collect oxygen), therefore oxygen is collected which is needed to release energy for physical work/equiv.	(1)
(d)	(i)	<b>left ventricle / heart muscle</b> - Cardiac hypertrophy/increases in size/increase in thickness/gets stronger/more forceful/equiv.	(1)
	(ii)	Increase in stroke volume/increase in cardiac output/more oxygenated blood circulating the body/equiv, (therefore more oxygen available for energy release)/equiv.  NB. DO NOT ACCEPT: pump more blood/drop in heart rate.	(1)
		(Total 12	marks)

11.	(a)	(i)	Oxygen.	(1)
		(ii)	Carbon dioxide.	(1)
		(iii)	Nitrogen.	(1)
	(b)	(i)	A/oxygen - Decreases.	(1)
		(ii)	A/oxygen - Because some is <u>used</u> to release energy/in respiration/ <u>used</u> to break down glucose/in the energy equation/oxygen <u>used</u> by the (working muscles)/equiv.  NB. DO NOT ACCEPT: more oxygen in body/used in gas exchange/ to make muscles move/to make muscles work.	(1)
	(c)	Gluc	ose.	(1)
			(Tota	l 6 marks)

12.	(a)	(i)	Long (bone).	(1)
		(ii)	Flat (bone).	(1)
	(b)	(i)	Long bones act as levers/muscle attachment so they can hit the ball/equiv.  NB. DO NOT ACCEPT: answers that just talk about specific movements eg helps move the stick/ swinging the stick.  OR  Blood production so oxygen can be carried on red blood cells/platelets so that player isn't substituted if cut.  NB must be in context to qualify.	(1)
		(ii)	Protects the brain so player is less likely to get <u>injured</u> and taken off the pitch/equiv.  NB. DO NOT ACCEPT: players not hurt/simple explanation of function on its own/protects brain on its own not enough.  (Total 4)	(1)
			(Total 4	marks

13.	(a)	1. Femur.	(1)
		1. Tibia.	(1)
		Note to examiners - allow any order.	
		NB check spelling of Tibia- not being confused with Fibula.	
	(b)	Flexion - extension.	(1)
		NB1. Allow any order. NB2. Must have both correct to gain mark.	
	(c)	1. Quadriceps.	(1)
		2. Hamstrings.	(1)
		NB. Allow in any order	
	(d)	<ul><li>Isotonic</li><li>Concentric.</li></ul>	(1)
	(e)	Voluntary.	(1)
	(f)	Ligaments.	(1)
		(Te	otal 8 marks)
		TOTAL FOR SECTION TW	O: 80 MARKS

## **SECTION THREE**

14	(a)	(i)	<ol> <li>No alternation of body pa arms.</li> </ol>	rts/ all arm actions/only works	(3)
			2. All skill based therefore v stations.	von't improve fitness/no fitness	
			3. All the skills don't relate stations sport specific.	to badminton/basketball/not all	
			NB1. Accept answers in any category of answers.	order, but only one from each	
			NB2. DO NOT ACCEPT: refer number of stations/lack of	ence to reps or time at stations or variety.	
				ons relating to use of weight/CV inuous running/small sided games.	
		(ii)			(3)
			Press ups Bicep curls Tricep dips	Squats Burpees Pull ups on the beams	
			Bench press Sit ups	Agility/ ladder runs	
			Star jumps Skipping	Step ups Bench astrides	
			Shuttle runs		
			NB1. Accept any three, in a	ny order.	
				ons relating to use of weight/CV inuous running/small sided games.	

		Station in circuit	Component of fitness
	1	Dribbling in and out of	Agility/speed/
		cones	Coordination/CV
			endurance/cardio
			vascular endurance/
			stamina
	2	Chest passes	Coordination/ Muscular
			endurance
	3	Shooting	Coordination
	4	Student station	Muscular endurance
		(category 1)	maseatar erraararree
		(category 1)	
		sit ups	
	5	Student station	Muscular
		(category 2)	endurance/strength/
		(	power
		press ups/ Squats/ Bicep	povie.
		curls/Burpees/Pull ups on	
		the beams/Tricep dips/	
		Bench press	
		Janes pross	
	6	Student station	Agility/speed/
		(category 3)	Coordination
		Agility/ladder runs	
	7	Student station	Muscular/CV endurance/
		(category 4)	cardiovascular
			endurance/stamina
		Star jumps/Step ups/	
		Bench astrides	
	8	Student station	CV endurance/
		(category 5)	cardiovascular
			endurance/stamina
		Skipping	Co-ordination
	8	Student station	
		(category 6)	
		Shuttle runs	Speed
		If fitness station not describe for associated component of	
	NB2.	No mark for stating station	already credited.

# (ii) IF BADMINTON Selected:

Station in circuit	How performance would be improved
1/Dribbling in and out of cones.	Increased speed of movement around court to chase shuttle/ opponent/reach shuttle.
2/Hitting ball against a wall.	More consistent/ accurate strikes of shuttle/equivalent.
3/Serving.	Better placement of serves making it harder for opponent to return/equivalent.

(3)

## IF BASKETBALL Selected:

Station in circuit	How performance
	would be improved
1/Dribbling in and out of cones.	Increas <u>ed</u> speed of movement around court to chase ball/opponent/break free/dodge free/ change direction.
	Bett <u>er</u> marking/bett <u>er</u> ball control.
4/Chest passes against a wall.	More consistent/ better/more accurate passing.
5/Stationery shots at a basket.	Increas <u>ed</u> number of baskets scored.

NB1. If no sport selected or obvious from answer no mark.

NB2. No mark for stating the activity.

(c)		an be used to improve any component of fitness/ more than ne/improve skill and fitness/wide range of muscle groups	(3)
		an be carried out with limited equipment/cheap to organise/easy o set up	
	3. C	an be used with large numbers	
		an be completed in a relatively small space/variety of spaces/can ake place indoors or outdoors	
		asy to individualise/easily adapted to different sports/work on arget sport/work on game skills	
	6. E	asy to alter intensity	
	a	Notivating/variety/not always the same/lots of different ctivities/not so boring because of change of activity/more un/easy to measure progress.	
	NB A	Accept answers in any order, but only one from each category of vers.	
(d)	(i)	Carbohydrates.	(1)
	(ii)	Can be used in either aerobic or anaerobic activity/energy is released more rapidly (than fats) (or equivalent).	(1)
		NB1 DO NOT ACCEPT: releases large amounts of energy/more energy.	
		NB2 if (i) incorrect no marks for (ii).	
		(Total 20	marks)

15.	(a)	(i)	A combination of more than one method of training/equiv.  NB. DO NOT ACCEPT: Training for more than one sport/different type of training.	(1)
		(ii)	Her event is made up of 3 different sports/equiv.  NB: If (i) is incorrect no marks for (ii).	(1)
	(b)	(i)	F - frequency I - intensity T - time T - type  NB1. Time or type can be in any order.  NB2 DO NOT ACCEPT: tedium.	(1)

	(ii)	F - Katie could train more often/increase frequency.	(4)
		I - Katie could make herself work harder during the session/equiv.	
		T - Katie could work for longer within the session/equiv.	
		T - Katie should make sure she concentrates on improving aspects of fitness related to her activity rather than general fitness/equiv.	
		Allow T for type or time in any order.	
		NB. DO NOT ACCEPT definitions only.	
(c)	(i)/ (ii)	Correct clothing/footwear/ no jewellery/hair tied back/equiv	(1)
		2. Warm up/stretching	(1)
		3. Examples of additional safety items relating to the activity (eg helmets/road safety - florescent jacket/bike lights)	
		4. Correct equipment/checking equipment/using safety equipment/equiv	
		5. Correct facilities/equiv	
		6. Using correct technique	
		NB1. Accept answers in any order, but only one from each category of answers.	
		NB2. DO NOT ACCEPT: over train/train too hard/cool down/warm down.	
(d)	(i)	The amount of blood ejected from the heart in <u>one minute/</u> HR x SV/Heart Rate multiplied by Stroke Volume.	(1)
		NB DO NOT ACCEPT: pumped around the body in one minute.	
	(ii)	Increased stroke volume/increase amount of blood ejected from the heart in one beat.	(1)
		Accept alternatives to increased, eg goes up/raised.	
		NB DO NOT ACCEPT: increased cardiac hypertrophy/stronger heart.	
(e)	(i)	ļ , , , , , <del>,</del>	(1)

(f)		amount of air breathed in or out of the lungs in each th/normal breathing in and out.	(1)
	NB C	an be in or out - candidate does not need to state both.	
(g)	(i)	Increased breathing rate/heavy breathing/gasping for air/out of breath/panting.	(1)
	(ii)	The amount of oxygen consumed during recovery <u>above/more than/extra</u> /that which would have ordinarily been consumed in the same time at rest/equiv.  NB1 DO NOT ACCEPT: reference to lactic acid removal/shortage of oxygen.	(1)
		NB2 DO NOT ACCEPT: lack of oxygen if stated on its own or Lack of oxygen to the working muscles if stated on its own.	
(h)	(i)	Triceps/triceps brachii.  If triceps and biceps on same line mark first answer only.	(1)
	(ii)	Biceps/biceps brachii.  If triceps and biceps on same line mark first answer only.	(1)
	(iii)	1. Radius 2. Ulna.	(2)
		NB. Accept any order.	

16.	(a)	(i)	Short bones.	(1)
		(ii)	Very strong.	(1)
	(b)	(i)	<ul><li>Flexed</li><li>Extended.</li></ul>	(2)
		(ii)	<ul><li>Extended</li><li>Elbow</li></ul>	(2)
	(c)	(i)	Deltoids.	(1)
		(ii)	Pectorals/pectoralis major.  NB DO NOT ACCEPT: Pecs.	(1)
		(iii)	Gastrocnemius.  NB DO NOT ACCEPT: calf muscle.	(1)
		(iv)	Abdominals.  NB DO NOT ACCEPT: abs.	(1)
	(d)	(i)	Anaerobic.	(1)
		(ii)	Lactic acid.	(1)
		(iii)	Fast twitch.	(1)
		(iv)	Tires easily/can't work for long period of time.	(1)
		(v)	Any named throwing events/sprints (max 400m)/long, high and triple jump.	(1)
	(e)	(i)	How well a task is completed/ability to do a task well/equiv.  NB DO NOT ACCEPT: use of the term performance unless explained.	(1)
		(ii)	The ability to do strength performances quickly/Power = strength*speed.  NB Must indicate explosive use of speed.	(1)

(f)	(i)	Muscle hypertrophy/stronger muscles.		
		NB DO NOT ACCEPT: bigger muscles/thicker muscles/more toned.		
	(ii)	<ol> <li>Drop in resting blood pressure</li> <li>Reduces chance of CHD/coronary heart disease/strokes/heart attacks</li> <li>Reduces cholesterol</li> <li>Reduces asthma</li> <li>Can prevent onset of diabetes</li> <li>Reduce the chance of obesity</li> <li>Reduction of chance of osteoporosis</li> <li>Mental health benefit.</li> </ol> NB1. Any two points in any order. NB2. Need to be specific as stated in the mark scheme ie. NB3 DO NOT ACCEPT: resting heart rate/training gains relating to fitness/strengthens bones/not stress on its on, must say stress relief/release to be credited	(2)	
		(Total 2	0 marks)	
		TOTAL FOR SECTION THREE: 6	0 MARKS	
		TOTAL FOR PAPER: 15	0 MARKS	

# 2007 GCSE PHYSICAL EDUCATION (SHORT COURSE)

#### **MARK SCHEME - 3827**

- **1.** B
- **2.** C
- 3. C
- **4.** B
- **5.** D
- **6.** D
- **7.** B
- **8.** B
- 9. A
- **10.** C
- **11.** B
- **12.** D
- 13. C
- 14. D
- **15.** B
- **16.** B
- **17.** D
- 18. C
- **19.** A
- **20.** C
- **21.** D
- **22.** B
- **23.** D
- **24.** C
- **25.** B
- **26.** D
- **27.** A
- **28.** C
- **29.** A
- **30.** B
- **31.** C
- **32.** C
- **33.** B
- **34.** D
- **35.** A
- **36.** A
- **37.** D
- **38.** C
- **39.** D
- **40.** A