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Mark Scheme (Results)

June 2011

GCE Physical Education (6PE03)
Paper 01

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Question Number	Answer	Mark
1	(> = increase in) 1. Initial preparation / Gross motor activity/pulse raiser/heat rate elevation — > HR /increase in blood flow > depth and rate of ventilation > localised and core temperature or equivalent/vascular shunt/ 2. Injury prevention / Stretching / mobility phase — > muscle elasticity / > localised muscle temperature / > ROM or equivalent 3. Skills practice — > reaction times / > coordination / timing or equivalent 4. Sport specific /game specific — > reaction times / > coordination / timing or equivalent/appropriate psychological response	**(6)**

Question Number	Answer	Mark
2	1. Acclimatisation involves arriving several days earlier before competition in order for the body to adjust to the new environment 2. Acclimatisation is helping the athlete bridge the difference between training and competition environment 3. Can take between 3-5/5-10/10-18 days Heat and humidity 4. as body acclimatises it becomes more efficient at thermo regulation 5. Lower heart rate at given exercise level 6. Better maintenance of core body temperature 7. Sweat response starts earlier and work to a greater level 8. Body will absorb more fluid from diet /blood/plasma volume increases Altitude 9. Changes to effect of partial pressure 10. Increase in EPO release 11. Increase in red blood cells/increase in hemoglobin	**(5)**

Question Number	Answer	Mark
3	1. Imagery/visualisation defined as the ability to form mental images of things or events/also referred to as mental rehearsal 2. coping strategy to help a performer deal with stress/frustration/anger 3. both can be used as relaxation/stress control/psyching up or psyching down 4. Both help performer focus on most important information/improve concentration/selective attention 5. Visualisation more of an internal process/ helps a performer run through performance/without actual physical performance 6. Visualisation more proactive 7. Allows performer to anticipate/plan tactics /plan A and B 8. boosts confidence levels/self efficacy 9. Imagery may involve past successful past performances/ flowing movements of an elite role model 10. Imagery often uses external focus 11. Imagery more reactive – response during performance	**(6)**

Question Number	Answer	Mark
4a	1. Marathon/continuous exercise of over 2-4 hours takes almost all of body's glycogen stores/after 90 mins body's glycogen/glycogen stores fully depleted 2. Need to eat CHO/glucose to allow glycogen replenishment 3. Glycogen can only be replenished through aerobic pathway 4. Glycogen replenishment is long process/slow component of recovery 5. Runner may have carbo loaded before race/may not reach pre race level 6. Use of CHO gels and drinks during race <u>would minimise glycogen depletion</u> 7. Window of opportunity/if eat within 2 hours /double rate of glycogen resynthesis 8. Eating food with High GI would increase rate of resynthesis in early stages 9. Muscle damage slows glycogen resynthesis	**(3)**

Question Number	Answer	Mark
4b	1. During race pace themselves/conserve glycogen stores by running under threshold 2. Avoid short bursts hitting anaerobic threshold/keep check on heart rate 3. Taking glucose drinks/gels/tablets during race 4. Frequent/regular intake of CHO 5. Pre loading/carbo loading would delay depletion	**(3)**

Question Number	Answer	Mark
5a	1. (Event outcome) – **result** of sporting activity is known 2. (available info) – could include won or opponents win/loss record- referee-crowd-personal mood/level of anxiety 3. (causal attribution) – giving reason for result could include internal or external/intentional unintentional/stable or unstable 4. (expectancy) – anticipation of **future** wins and losses/ what we predict future results\performance might be like 5. (affective response) – feelings of pride/shame/how the performer feels at the time/emotions 6. (decision) – whether performer decides to continue or not/persists with performance/**future** training	**(6)**

Question Number	Answer	Mark
5b	1. a belief that failure/poor performance is inevitable 2. giving uncontrollable/stable attributions 3. giving internal attribution/past experiences. 4. linked to feelings of low confidence and poor self esteem/low self efficacy 5. more common with NAF/low achieving performers 6. need to undergo attribution retraining to change	**(2)**

Question Number	Answer	Mark
6	Carron identified four factors 1. Environmental factors – club membership, location, team 2. Personal factors /friendship of group/group get on socially 3. Leadership factors/group has clear lines of leadership/clear leader 4. Team factors /individual goals are understood by whole group/team work/ability level of group Other factors 5. Group have a shared identity/ownership/agree on common goals 6. Good communication between group/team 7. Good coordination of group/effective administration of group 8. Winning/successful run/good performances	**(4)**

Question Number	Answer	Mark
7	1. State funding/sponsorship of sport/ athlete receiving grants 2. State control of sport/state department have role in nurturing talent/centralised system 3. Institute/academy system is the main focus 4. Based on East German model of elite sport support 5. Network of institutes/state as well as federal institutes 6. Athletes having access to best coaches/facilities in one place 7. Clear pathway/well planned sports pyramid/wide base through junior programmes (but need link to elite) 8. Talent identification programmes/sports search/ selection of athletes at an early age 9. Medal winners are rewarded by state/scholarships awarded to performers 10. National standards/support for coaches 11. Full sports science support offered to elite athletes 12. State teams important – state of origin fixtures bridge gap between club and international sport 13. ACE programme to support athletes with career/education alongside training	**(7)**

Question Number	Answer	Mark
8	1. Camps are used as a base for training and preparation before a competition 2. They will be based in areas that have similar environmental/cultural variables to that of the host nation/city/area 3. Manage diet in run up to event 4. Increased <u>access</u> to support team/sports science/medical team 5. Allow teams/performers to rehearse practice in comparable conditions/rehearse tactics/drills 6. Holding camps are used in short term phase/few weeks before and up to event/competition 7. Athletes use camp to acclimatise to conditions/train in similar environment/similar altitude 8. get over jetlag/travel/similar time zones 9. bonding with team/team cohesion 10. Team kept away/manage contact with media 11. Helps teams mentally focus/enhance psychological 12. preparation/reducing distractions 13. Preparation camps are long term camps up to a year before event/ months 14. Allow collection of data such as wind speed/temperature 15. allow athletes to test out equipment and kit 16. allow dry run or procedures and transfers	**(8)**

Question Number	Indicative content
9	ANSWER GUIDELINES 1. Technology examples in terms of monitoring fitness/use of ICT in planning and tracking training programme 2. Use of technology in technical analysis of skill/biometric measurements 3. Using video/computer animation to work on technique/Dartfish 4. Examples of internal monitoring/heart rate/ lactate linked to threshold and training zones 5. Examples of external monitoring to include force and acceleration measurement/use of GPS 6. Muscle activity analysis/electromyography 7. Use of photography/stroboscope to analyse movement 8. Altering training environment/altitude effects/use of hypoxic chambers/ live low train high 9. Using TV/media development such as hawkeye/prozone to look for strengths and weakness/planning to tackle opponents 10. Technology now plays a key part in academy/institute of sport approach 11. Elite teams now have large teams backing them up 12. use of ergogenic aids 13. Use of technology to develop equipment and clothing/reduce drag Counter arguments 14. Some reluctance of some sports such as football to fully embrace technology e.g. goal line technology 15. Some sport technology has become over dominant e.g. swim suits 16. Use of technology will depend on wealth of performer/developing countries/sports suffer 17. much emphasis now on statistics in sports planning and preparation/ losing some of spontaneity in sport/natural talent

Level	Mark	Descriptor
	0	No rewardable material
Level 1	1-4	An answer that mostly fails to address the question and contains many inaccuracies and irrelevancies. Very little evidence of synoptic analysis with statements that demonstrate a lack of understanding. A poorly structured answer. Incorrect spelling, punctuation and grammar. Incorrect use of terminology. Many inaccuracies.
Level 2	5-8	An answer that fails to address many parts of the question. There is little evidence of synoptic analysis with sweeping statements that may contain some relevant information but generally remain unsupported by evidence or accurate examples and suggest limited understanding. Irrelevant points and repetition may be used to pad out the answer. A poorly structured answer in which there may be errors in spelling, punctuation and grammar. Incorrect use of terminology. A significant proportion of material is irrelevant.
Level 3	9-12	An answer that **describes accurately** the use of technology but may not differentiate between preparation and performance. Relevant points may be supported by examples but only partially developed – there may be some inaccuracy in dates and names. Limited attempt at a conclusion – only limited attempt to assess the merits of the increase of technology in sport. A basic structure is evident. Some incorrect use of terminology. There may be errors in spelling, punctuation and grammar. A number of inaccuracies.

Level 4	13-15	**A<u>ttempts to answer the question – though may still lack depth and or develop discussion</u>** of the use of technology Some analysis and debate in terms of preparation v performance is evident, although this may be lacking both in depth and balance - will be mainly concerned with the positive impact it makes an attempt to address the key issues raised in the question. An obvious attempt to structure the essay. Fundamentally sound use of terminology. Generally clear and concise with limited inaccuracies. Satisfactory spelling, punctuation and grammar.
Level 5	16-18	An answer that **<u>discusses</u>** fully the use of technology in both preparation and performance in all three areas - making some reference to the impact. A good understanding is demonstrated through some detailed analysis and may use examples. Factual information and accurate examples, many taken from global games, are used in support of points made. Will include a conclusion and an attempt at synthesis which gives an opinion on the merits of technology in sport – but this may be more descriptive. A well structured answer with predominantly accurate use of spelling, punctuation and grammar. Correct use of terminology. Clear and concise but may occasionally make an irrelevant comment.
Level 6	19-20	An answer that **<u>debates</u>** in detail the increasing use of technology in sport in both preparation and performance phases. There is in-depth understanding of how in the 21st century sport is simply reflecting the technological revolution. Includes correct use of technical language and factual information throughout, demonstrating a clear understanding of the subject matter. A range of accurate practical examples predominantly taken from global games supports the vast majority of points. A range of contemporary and original statements are included. There is a clear attempt at syntheses through a reasoned conclusion this should include a discussion of the merits and limitations of such a change in emphasis. A well structured answer with continuous prose. Predominantly accurate use of spelling, punctuation and grammar. Correct use of terminology. Clear, concise and relevant throughout.

Question Number	Indicative content
10	**CONTENT GUIDELINES** Better answers will refer to a range of examples in their answer **Physiological** 1. Goals need to be SMARTER/SMART 2. Gap analysis of fitness/skill needs for teams and individuals/performance profiling 3. Build in this information to programmes of training for team as a whole/and individuals 4. Look at using cycles of training/- periodisation - macro/meso/micro 5. Plan both off and on season preparation 6. Tapering of training as competition approaches 7. Importance of rest, need to allow body to fully recover 8. Nutrition adjustment, carbo loading, 9. Hydration – importance of maintaining fluid balance 10. Warm weather training/ use of preparation camps **Psychological** 1. Use of mental preparation, techniques to include rehearsal, watching previous good performances 2. Inverted U – developing correct level of arousal, getting into 'zone' 3. Visit to venue/train at venue day before 4. Mental rehearsal, use of imagery, linked to tactics 5. Team preparation- aiming to develop cohesion and team spirit, importance of team briefs and meetings 6. Watching tapes of opposition, highlighting opponents' strengths and weaknesses. **Technical** 1. Analysis of technique to show area that need improvement 2. Use of perfect model profiling/use of ICT and biomechanics/ Dartfish/ Kandle 3. checking/trying out new equipment 4. Matching footwear clothing to environmental situation, studs, ice jackets in warm climates. 5. Use of ergogenic aids

Level	Mark	Descriptor
	0	No rewardable material
Level 1	1-4	An answer that mostly fails to address the question and contains many inaccuracies and irrelevancies. Very little evidence of synoptic analysis with statements that demonstrate a lack of understanding. A poorly structured answer. Incorrect spelling, punctuation and grammar. Incorrect use of terminology. Many inaccuracies.
Level 2	5-8	An answer that fails to address many parts of the question. There is little evidence of synoptic analysis with sweeping statements that may contain some relevant information but generally remain unsupported by evidence or accurate examples and suggest limited understanding. Irrelevant points and repetition may be used to pad out the answer. A poorly structured answer in which there may be errors in spelling, punctuation and grammar. Incorrect use of terminology. A significant proportion of material is irrelevant.
Level 3	9-12	An answer that **describes accurately** the basics of long term planning. Relevant points may be supported by examples but only partially developed – there may be some inaccuracy in dates and names. Limited attempt at a conclusion – may have a strong physiological bias. A basic structure is evident. Some incorrect use of terminology. There may be errors in spelling, punctuation and grammar. A number of inaccuracies.
Level 4	13-15	**Attempts to answer the question – though may still lack depth and or develop discussion** of long term planning – will give detailed description of periodisation and SMARTER targets although this may be lacking both in depth and balance - will be mainly concerned with the physiology and psychology. An obvious attempt to structure the essay. Fundamentally sound use of terminology. Generally clear and concise with limited inaccuracies. Satisfactory spelling, punctuation and grammar.
Level 5	16-18	An answer that **discusses** fully the concept of long term planning – covers all three areas in depth- making some reference to the impact. A good understanding is demonstrated through some detailed analysis and may use examples. Factual information and accurate examples, many taken from global games, are used in support of points made. Will include a conclusion and an attempt at synthesis which gives an opinion on the merits of long term planning in sport – but this may be more descriptive. A well structured answer with predominantly accurate use of spelling, punctuation and grammar. Correct use of terminology. Clear and concise but may occasionally make an irrelevant comment.
Level 6	19-20	An answer that **debates** in detail long term planning in sport. There is in-depth understanding of how its used in all three areas Includes correct use of technical language and factual information throughout, demonstrating a clear understanding of the subject matter. A range of accurate practical examples predominantly taken from global games supports the vast majority of points. A range of contemporary and original statements are included. There is a clear attempt at syntheses through a reasoned conclusion this should include a discussion of the merits and limitations of such a change in emphasis. A well structured answer with continuous prose. Predominantly accurate use of spelling, punctuation and grammar. Correct use of terminology. Clear, concise and relevant throughout.

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Rewarding Learning