

## NEW ZEALAND SCHOLARSHIP 2004

### ASSESSMENT SCHEDULE FOR PHYSICAL EDUCATION

#### Question One: Physical activity and health

| Evidence  | Judgement   |
|---|---|
| <p>For Outstanding Performance - Performance Descriptor 1</p> <p>The candidate is required to critically evaluate information related to physical activity through the application of knowledge of biophysical principles and socio-cultural factors drawn from learning experiences in, through, and about movement. They are required to demonstrate an exceptional level of sustained critical evaluation, showing outstanding breadth of knowledge and depth of understanding.</p> <p><i>At this level</i> the candidate response must demonstrate a high level of sophistication across a range of factors, including integration of ideas, original thinking, and fluent and precise communication.</p> <p>The candidate:<br/>critically evaluates the nature of contemporary societies and the implications on health of an active lifestyle.</p> <p>The factors reducing the amount of incidental exercise and underpinning the increasing nature of sedentariness in modern societies may include but are not limited to:</p> <ul style="list-style-type: none"> <li>• The convenience lifestyle <ul style="list-style-type: none"> <li>– decreased need to expend energy to gather food and sustain life</li> <li>– growth and ease of use of the car as primary mode of transport.</li> </ul> </li> <li>• Advances in technology <ul style="list-style-type: none"> <li>– proliferation of labour-saving devices</li> <li>– decreasing physical labour in occupational work.</li> </ul> </li> <li>• Changing nature of leisure time activity <ul style="list-style-type: none"> <li>– growth of sedentary forms of entertainment, eg television, computers, computer games.</li> <li>– the changing nature of work.</li> <li>– shifting attitudes to leisure and work, eg more students working after school to afford lifestyle – cellphones, cars, university fees.</li> </ul> </li> <li>• Changing societal policies and concerns <ul style="list-style-type: none"> <li>– increasing concerns for safety that lead to changed patterns of play and recreation</li> <li>– changing laws and policies that impact on the nature of incidental exercise.</li> <li>– increasing government promotion of physical activity.</li> <li>– changing barriers to exercise</li> </ul> </li> </ul> <p>Hypokinetic diseases include:</p> <ul style="list-style-type: none"> <li>• Coronary Heart Disease (CHD)</li> <li>• Cerebral Vascular Disease (CVD/Stroke)</li> </ul> | <p>The question is focused on examining if the candidate can critically evaluate the socio-cultural context of physical activity and the implications of an increasingly sedentary lifestyle for health. For scholarship, the candidate's answer must include consideration of why deliberate exercise is necessary within contemporary society and how the introduction of deliberate exercise may have both positive and negative consequences for health.</p> <p>For the first question, a critical evaluation needs to identify and explain the socio-cultural or technological factors that are reducing the amount of incidental exercise in modern, westernised societies.</p> <p>Performance Descriptor 2</p> <p>The candidate must be able to identify and discuss a range of factors that underpin the growth of sedentary lifestyles in modern society. As a guide, at least four factors should be identified, but three may be valid in some cases, where there is an extensive coverage or depth of understanding of the three identified factors.</p> <p>Performance Descriptor 3</p> <p>Candidates did not discuss to sufficient breadth or depth or did not critically evaluate the nature of contemporary society and sedentary lifestyles. Could have completed one section well and the other to a lesser degree.<br/>The quality of synthesis distinguished the candidates.</p> <p>Performance Descriptor 4</p> <p>Candidates in this band generally able to critically evaluate aspects of the question but i.e. coverage but not the depth was evident or the reverse.<br/>The response did not answer the question.</p> <p>For the second question, a critical evaluation needs to consider both the positive and negative implications that the introduction of physical activity may have for individuals. In the positive sense, the value that physical activity has as a preventative measure against hypokinetic diseases, and the benefits this has for health, must be identified. These benefits may be the result of introducing deliberate exercise, increasing incidental exercise, or both. The candidate must identify a range of benefits (across socio-cultural and biophysical aspects) and discuss them in relation to their ability to offset the range of diseases related to a lack of regular physical activity (hypokinetic diseases). The candidate must also consider the negative</p> |

| Evidence  | Judgement   |
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| <ul style="list-style-type: none"> <li>• Diabetes/insulin resistance (through obesity)</li> <li>• Cancer</li> <li>• Musculoskeletal, eg osteoporosis.</li> </ul> <p>The benefits of physical activity may include but are not limited to:</p> <ul style="list-style-type: none"> <li>• Biophysical aspects such as cardio-respiratory training effects, musculoskeletal training effects, body shape, neurological, endocrinological</li> <li>• Socio-cultural aspects such as psycho-social effects, enhanced feelings of well-being, stress reduction, self-esteem, social contact and cohesion.</li> </ul> <p>The risks of physical activity may include but are not limited to:</p> <ul style="list-style-type: none"> <li>• musculoskeletal injury associated with physical activity</li> <li>• sudden death (cardiac arrest)</li> <li>• impaired immune function</li> <li>• menstrual dysfunction</li> <li>• respiratory tract disorders (eg onset of asthma)</li> <li>• eating disorders</li> <li>• exercise addiction.</li> </ul> <p>In question 1the following areas could have been considered Physical Activity</p> <p>Part (a)</p> <ul style="list-style-type: none"> <li>• Identify factors that contribute to a sedentary lifestyle</li> <li>• Developing an argument</li> <li>• Specific comment on the factor and impacts on incidental exercise- how and/or why</li> <li>• Historical evidence –impact on incidental activity due to...</li> <li>• Reasons for change</li> <li>• Personal judgement-falling out of developed argument or as a catalyst for forming an argument/ or an evaluative comment</li> <li>• Synthesis of ideas i.e.can show process of combining different ideas in formation</li> <li>• Range of factors</li> </ul> <p>Part(b)</p> <ul style="list-style-type: none"> <li>• Covered the basics with some detail in the explanation</li> <li>• Advantages and disadvantages – some candidates identified factors with no explanation or examples</li> <li>• What is deliberate exercise</li> <li>• What are the assumptions that made it cardiovascular / acute or chronic</li> <li>• What is possible to complete in an hour</li> </ul> | <p>implications of deliberate physical activity. The risks of physical activity should be identified and discussed.</p> |

| Evidence  | Judgement |
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| <p>Codes used in Question 1</p> <p>G=generalization<br/> S=sweeping statement<br/> NE=no evidence<br/> F=factor<br/> T=technology<br/> C/ CN = convenience/<br/> L= lifestyle<br/> D=developing an argument<br/> CWL- this illustrates several codes combined eg<br/> Cultural /work /lifestyle combined<br/> W=work<br/> N=why not or not active<br/> BP=blood pressure<br/> SC = Socio –cultural<br/> =cultural</p> |           |

## Question Two: The nature and management of risk

| Evidence  | Judgement   |
|---|---|
| <p>For Outstanding Performance - Performance Descriptor 1</p> <p>The candidate is required to critically evaluate information related to physical activity through the application of knowledge of biophysical principles and socio-cultural factors drawn from learning experiences in, through, and about movement. They are required to demonstrate an exceptional level of sustained critical evaluation, showing outstanding breadth of knowledge and depth of understanding.</p> <p><i>At this level</i> the candidate response must demonstrate a high level of sophistication across a range of factors, including integration of ideas, original thinking, and fluent and precise communication. The candidate:</p> <p>clearly evaluates the nature of risk and the principles of risk management as they relate to the statement. For a critical evaluation the candidate's response should:</p> <ul style="list-style-type: none"> <li>• identify and clarify the issue within the statement</li> <li>• explain or offer an interpretation of the nature of risk</li> <li>• identify the principles of risk management</li> <li>• offer a critique of the statement</li> <li>• support the discussion with relevant examples.</li> </ul> <p>Elements that can be considered in the critique include but are not limited to:</p> <ul style="list-style-type: none"> <li>• The nature of risk in physical activity <ul style="list-style-type: none"> <li>– definitions of risk and its relationship to other concepts such as danger, accident, adventure, safety and challenge</li> <li>– types of risk, eg perceived risk and real risk.</li> </ul> </li> <li>• Factors associated with participation and risk taking behaviour. Growth in variety and availability of risk taking activities</li> <li>• Principles associated with risk reduction <ul style="list-style-type: none"> <li>– the use of rules, policies and guidelines. Implementing BOT ,OSH policies, industry guidelines, safety rules, laws, ratios</li> <li>– leadership competencies – style, skills and compliance with industry guidelines, experience, expertise and contextualised understanding</li> <li>– instructional quality – knowing students, progressive development of skills, disclosure of risk.</li> </ul> </li> <li>• The use of planning tools (eg SAPS and RAMS sheets) <ul style="list-style-type: none"> <li>– identify potential risks/undesired events</li> <li>– identify causal factors, people, equipment, environment</li> <li>– develop appropriate management strategies.</li> </ul> </li> </ul> <p>Code- Question 2 C=COMMUNICATION</p> | <p>The question is focused on examining if the candidate can critically evaluate the concept of risk and risk management in physical activity events and/or outdoor settings.</p> <p>Performance Descriptor 2</p> <p>The candidates must be able to demonstrate an ability to synthesise or integrate their knowledge of risk, and support this with informed views and/or relevant examples.</p> <p>For a critical evaluation, the candidate's response should identify and clarify the issue inherent in the statement. This may involve:</p> <ul style="list-style-type: none"> <li>• challenging the assumption that it is risk that drives some people to participate in physical activities</li> <li>• adopting a position with risk management being equated to 'wrapping participants in cotton wool'.</li> </ul> <p>The candidate's response must also clarify and discuss the nature of risk. For Performance Descriptor 2, the candidate must be able to distinguish between the concepts of perceived risk and real risk.</p> <p>For a critical evaluation, the candidate's answer should also be able to identify the principles of risk management and integrate them into a response which outlines a rationale for managing risk in outdoor settings. At this level the candidate must be able to demonstrate knowledge of all the principles of risk management and be able to use relevant examples from their own experience to help illustrate the points being made.</p> <p>Performance Descriptor 3</p> <p>Candidates did not discuss to sufficient breadth or depth or did not critically evaluate the nature of risk and/ or the principles of risk management as they related to the statement.</p> <p>The quality of synthesis distinguished the candidates.</p> <p>Performance Descriptor 4</p> <p>Candidates in this performance level generally able to critically evaluate aspects of the question but i.e. coverage but not the depth was evident or the reverse.</p> <p>The response did not answer the question.</p> |

### Question Three: Reflecting on trends in physical activity

| Evidence  | Judgement   |
|---|---|
| <p>For Outstanding Performance - Performance Descriptor 1</p> <p>The candidate is required to critically evaluate information related to physical activity through the application of knowledge of biophysical principles and socio-cultural factors drawn from learning experiences in, through, and about movement. They are required to demonstrate an exceptional level of sustained critical evaluation, showing outstanding breadth of knowledge and depth of understanding.</p> <p><i>At this level</i> the candidate response must demonstrate a high level of sophistication across a range of factors, including integration of ideas, original thinking, and fluent and precise communication.</p> <p>The candidate:<br/>critically evaluates the changing ethno-cultural mix of participants playing sport in New Zealand.<br/>Responses should consider how the agency of the individual is influenced by and interdependent with the nature of sport in society.</p> <p>The key elements that can be considered in the critique include but are not limited to:</p> <ul style="list-style-type: none"> <li>• Biological factors – physical maturation and the role size and strength play in sports performance. Increase in Māori and Polynesian population.</li> <li>• Identity construction – how the individual sees themselves and who they want to be.</li> <li>• Culture – the collective sets of values, beliefs and practices that mediate the way individuals identify themselves and make sense of their worlds.</li> <li>• Time and opportunity to participate in contemporary lifestyles. Variations in leisure pastimes, access to resources and facilities, increasing range of sports, expectations of success, familial support, etc, exist between different ethno-cultural groupings. The changing nature of the ethno- cultural composition of New Zealand society.</li> <li>• Social interaction.</li> </ul> <p>Additional elements that influence the nature of sport in modern society and that may also be considered and referred to in the critique include, but are not limited to:</p> <ul style="list-style-type: none"> <li>• Gender – changing cultural definitions of what it means to be masculine/feminine.</li> <li>• Commodification and commercialisation of sport – leading to an increased emphasis on performance and its promotion as a form of mass entertainment.</li> <li>• Professionalism – providing a legitimate way to earn money for physical performance. Increasing time and physical demands on participants.</li> </ul> <p>Codes used in question three</p> | <p>The question is focused on examining the candidate's ability to analyse a physical activity trend, especially as it relates to the participation practices of particular cultural groups within the conditions presented in late modernity.</p> <p>Performance Descriptor 2</p> <p>The candidate's response must include consideration of a range of appropriate factors and clearly explain the interdependent nature of these factors. The issue itself – that the cultural mix of participants is changing – must be seen as a complex relationship between the changing nature of sport within contemporary society and the factors that influence participation in sport.</p> <p>A critical evaluation would:</p> <ul style="list-style-type: none"> <li>• Identify and clarify the issue under discussion.<br/>This may involve taking a position in respect to the issue. While biological factors may be considered (eg maturation), these should not dominate the evaluation. A critical evaluation should focus on the socio-cultural nature of the issue. The trend may be analysed as one of increasing numbers of Māori and Polynesians playing sport, and/or decreasing numbers of Pākehā playing sport. The candidate may also question the construction of categories like Māori, Polynesian and Pākehā.</li> <li>• Identify and integrate the broad range of factors involved in mediating sports participation in contemporary societies. Consideration needs to be given to both the changing nature of sport in society and the factors that influence participation in sport. At this level a range of factors must be identified and explained.</li> <li>• Acknowledge the problematic and interdependent nature of the factors being discussed. The relationship between the nature of sport in society and the factors that influence participation in sport should be seen as complex and interdependent with a range of factors.</li> </ul> <p>Performance Descriptor 3</p> <p>Candidates may not have been able to identify and clarify the issue. They lacked the ability to identify and integrate a broad range of factors and lacked the ability to see the big picture.</p> <p>Performance Descriptor 4</p> <p>Candidates in this performance level generally able to critically evaluate aspects of the question.</p> |

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| BF=<br>C= culture<br>I = Identity construction<br>T= time and opportunity<br>P= professionalism<br>B=bigger<br>G=<br>RH<br>RM=role model<br>rugby management ?money/ image<br>N= |  |
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#### Question Four: Movement analysis

| Evidence   | Judgement   |
|--|---|
| <p>For Outstanding Performance - Performance Descriptor 1</p> <p>The candidate is required to critically evaluate information related to physical activity through the application of knowledge of biophysical principles and socio-cultural factors drawn from learning experiences in, through, and about movement. They are required to demonstrate an exceptional level of sustained critical evaluation, showing outstanding breadth of knowledge and depth of understanding.</p> <p><i>At this level</i> the candidate response must demonstrate a high level of sophistication across a range of factors, including integration of ideas, original thinking, and fluent and precise communication.</p> <p>The candidate:</p> <p>critically evaluates the one-foot and two-feet jumping action and proposes a feasible explanation of why muscle activation and sequence would be different between the two.</p> <p>The biomechanical concepts that can be used to explain the differences between the two movements include but are not limited to:</p> <ul style="list-style-type: none"> <li>• Transfer of momentum<br/>At the point of takeoff, the differences in the action may affect the transfer of momentum from approach to lift.</li> <li>• Impulse (including concepts such as force, force summation and power).<br/>If take-off speed and height attained are the same, then the musculature of one leg must be doing more than in the two-leg take-off (although not twice as much because of other possible differences).</li> <li>• Centre of gravity<br/>Postural differences between the two actions will alter the position of the centre of gravity. In the one-foot take-off, the supporting leg will be swung</li> </ul> | <p>The question is focused on examining if the candidate can undertake a biomechanical analysis of two similar movements and relate this to the neuromuscular activity of those two movements.</p> <p>Performance Descriptor 2</p> <p>The candidates must demonstrate an ability to compare and contrast two movement sequences by analysing the biomechanics involved, and then use this to generate a feasible explanation why the muscle activity between the two may be different.</p> <p>For a critical evaluation of the jumping action, the candidate must compare and contrast the two jumping actions by drawing upon biomechanical concepts to analyse the differences between the two actions. The candidate should assume from the scenario that particular factors remain stable between the two actions, such as weight of the player, speed on take-off, height attained in the jump, and spiking action creating contact force. With these constant, the analysis may then consider variations in transfer of momentum, impulse at take-off, centre of gravity (related to changing take-off postures) and skeletal stabilisation. At this level the candidate should be able to integrate at least two biomechanical concepts into their analysis of the two ways of jumping.</p> <p>A feasible explanation of the muscle activity involved must relate the biomechanical analysis undertaken to principles of neuromuscular activity. Muscle activation sequence and magnitude is related to coordinating an intended movement while reacting to the biomechanical demands placed on the body by that movement. Differences between how the muscle activation is sequenced and the magnitude of that activation can be explained by the significant differences that exist between the two jumping actions. For example:<br/><i>In the two-foot take-off, the weight of the body is</i></p> |

| Evidence  | Judgement   |
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| <p>up, raising the centre of gravity. The position of this leg will then influence the centre of gravity during the jump.</p> <ul style="list-style-type: none"> <li>• Body stabilisation<br/>Moving the body onto one leg requires postural adjustments. By abducting the supporting leg, the body becomes cantilevered at the hip. Postural adjustments are made to maintain balance and stability.</li> </ul> <p>Additional elements that may also be considered and referred to in the critique include, but are not limited to levers and projectile motion.</p> | <p><i>evenly distributed between the two legs, while in the one-foot take-off, the weight is borne on one leg, with the body now cantilevered over the hip joint of the jumping leg. These differences are initiated and sustained by different muscular activity. The sequencing of the muscular activity will change because of the postural differences. For example, the hip muscles, particularly those involved in abducting the leg, will be activated differently in the one-foot take-off, because the weight of the body must now be supported on one leg. Similarly, the magnitude of the activation will be different because only one leg is being used to generate lift instead of two.</i></p> <p>Performance Descriptor 3</p> <p>Correct responses were negated by incorrect information which made it difficult for candidates to demonstrate a consistent level of understanding.</p> <p>Candidates struggled to relate the bio-mechanical analysis undertaken to neuromuscular activity.</p> <p>Performance Descriptor 4</p> <p>Correct responses were negated by incorrect information which made it difficult for candidates to demonstrate a consistent level of understanding.</p> <p>Candidates struggled to relate the bio-mechanical analysis undertaken to neuromuscular activity.</p> <p>Not enough information was presented to make a feasible explanation and therefore the critical evaluation was limited.</p> |