

B O A R D O F S T U D I E S
NEW SOUTH WALES

1998 HSC

EXAMINATION REPORT

Personal Development Health and Physical Education

Including:

- **Marking criteria**
- **Sample responses**
- **Examiners' comments**

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Published by
Board of Studies NSW
GPO Box 5300
Sydney NSW 2001
Australia

Tel: (02) 9367 8111

Fax: (02) 9367 8484

Internet: <http://www.boardofstudies.nsw.edu.au>

April 1999

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ISBN 0 7313 4128 7

98462

Personal Development, Health and Physical Education

Introduction

In 1998, 8890 students presented for the HSC examination in 2 Unit Personal Development, Health and Physical Education (PDHPE). This was a slight increase on the 8389 students who presented for the examination in 1997.

The broad nature of some core questions in the 1998 paper resulted in a range of interpretations from candidates. This allowed the better candidates to display a solid and indepth understanding of the syllabus areas by presenting clear and logical discussions and arguments. The less well prepared candidates tended to respond from a general knowledge perspective rather than using specific syllabus knowledge. As in previous years, some candidates elected to answer questions on options they have obviously not studied. The majority of candidates elected to answer the option question on The Art and Science of Coaching. These responses reflected the fact that most schools had studied this option. This was the first year that the First Aid and Sports Injuries option was not examined for the HSC. The quality of responses to the option questions were, in most cases, completed to an average standard. The responses to the option on Community Health Issues were poor. This was a reflection of the fact that most of the candidates who answered this question did not study the option at school. Also, a far greater number of candidates attempted the option on the Sociology of Games and Sport than had studied it at school. This may have been due to the broad nature of this question which allowed some candidates to respond using their general knowledge. The apparent hurried nature of some responses to the option question indicated that, despite being worth 20 marks, some candidates did not allow themselves adequate time to answer the question to the best of their ability. There were approximately 100 candidates who attempted to answer more than one option question in Section III — and most of these answered at least 3–4 additional questions. A few candidates attempted all the option questions.

HSC Marking Procedure

The marking process

Multiple choice answers to Section I of the 2 Unit PDHPE examination are computer processed. Sections II and III are marked by at least two independent markers from different groups at different stages of the marking process.

Marking teams are comprised of 8–9 markers led by a Senior Marker. Each team is usually assigned one question to mark for the whole marking process. Some teams or markers may switch over to a new question during the process to mark an option question.

Prior to the commencement of marking, Senior Markers read a wide sample of student responses in order to develop a marking criteria. Markers participate in an extended briefing session in order to gain a shared understanding of the marking criteria. This phase of the process involves detailed discussion, sampling of further scripts, and negotiating modifications to the marking criteria as appropriate.

Once the marking criteria and standards are agreed upon by all markers on a particular question, pilot marking begins. Pilot marking indicates the reliability of the marking criteria and markers' ability to interpret the criteria consistently. Marking begins when Senior Markers are satisfied that this has been achieved. Second marking usually begins when about two thirds of the scripts have been marked for the first time.

A script is considered discrepant if the mark given during first marking differs by a certain amount from the mark given during second marking. For questions out of 15, the difference is 4. For questions out of 20, the difference is 5.

Once the clerical operation identifies a discrepant script, the script is marked by a third marker, usually one of the Senior Markers, who does so without knowing the marks previously awarded. If the third mark does not resolve the discrepancy, the script will go for a fourth mark and so on until the discrepancy is resolved.

Markers are given the following advice to help them in the marking process:

- Marking is a ranking process. Use the entire range of marks. Beware of fence sitting.
- Forget personal and school standards and your memories of past papers and performances. Adhere to the marking guidelines set for this year.
- Keep to the marking guidelines and use your professional judgement. Place the script in a band first and then award a numerical mark.
- Mark positively. Mark what is there, not what is missing and do not deduct marks for incorrect statements. Aim for an overall impression mark after a careful reading.
- Give each script its due consideration but do not agonise over it. If you find a script that cannot be easily placed in the marking guidelines, discuss it with your Senior Marker.
- Aim for accuracy of marking, not speed.

The clerical operation

Each bundle of scripts has an accompanying marksheet which already has the centre number and candidate numbers on it for that bundle. Marks are recorded on these marksheets. No annotation is made on the scripts whatsoever. There is a second marksheet for the recording of marks during second marking. Both the first and second marksheets are completed independently at different times by different markers. There are procedures to ensure that markers do not mark scripts from their own school or scripts belonging to close relatives sitting for the examination.

The confidential nature of the marking process is stressed at all times and markers do not have access to marks awarded by other markers.

The clerical operation also identifies discrepant scripts and checks the final marks sent for computer processing.

The marker statistics operation

The marker statistics operation involves the following steps:

- When markers allocate a mark to a script, they place a tally mark on their tally sheet alongside that mark value.
- Markers' tally sheets are processed and statistical reports generated.
- The statistical reports are given to the Supervisor of Marking. These reports contain information on the overall distribution of marks for each question (ie mean and standard deviation across all teams marking the same question), as well as information on each marker (ie marking rate, mean and standard deviation).
- Copies of the team reports are given to each Senior Marker to help them in monitoring the marking patterns of each of their markers.

The Supervisor of Marking uses the statistical reports to monitor trends for the duration of the marking process. They are initially used in the pilot marking phase to ascertain whether the marking schemes are providing an acceptable distribution of marks for each question.

Once the marking schemes are finalised and first marking commences, the statistical reports are used to check that an acceptable distribution of marks is being maintained. The Supervisor of Marking discusses the results with the Senior Markers to ensure that any problems in applying the marking criteria are resolved consistently.

WRITTEN PAPER**SECTION I: MULTIPLE CHOICE****Questions 1–20**

The table below gives, for each question, the percentage of candidates who chose each response. The correct answer for each question appears in bold type.

Most questions were well answered. The overall mean of 12.8 reflected that this set of multiple choice items contained some easier questions which did not discriminate candidates adequately. This was particularly true of questions 1, 8, 9, 16, 17 and 19. In question 11 both distractors A and D were accepted as correct.

Question	% Response A	% Response B	% Response C	% Response D	% Correct
1	1.80	1.17	0.87	96.10	96.10
2	61.37	4.65	13.93	19.77	61.37
3	2.38	6.31	50.79	40.30	50.79
4	4.27	26.24	6.34	6.98	26.24
5	5.95	17.49	45.48	30.78	30.78
6	16.15	41.48	15.28	26.86	41.48
7	48.55	33.76	14.12	3.39	48.55
8	5.45	87.00	0.44	6.98	87.00
9	3.16	1.03	0.59	95.16	95.16
10	2.43	17.48	73.83	6.07	73.83
11	56.13	6.52	6.43	30.69	86.82
12	2.68	23.90	69.96	3.28	69.96
13	33.94	57.03	6.07	2.85	57.03
14	18.46	28.71	7.77	44.82	44.82
15	7.01	8.10	50.26	34.41	50.26
16	3.11	79.65	2.58	14.55	79.65
17	16.25	2.95	1.56	79.12	79.12
18	27.77	43.40	18.13	10.44	43.40
19	6.54	1.88	82.00	9.40	82.00
20	75.58	8.94	3.40	11.96	75.58

SECTION II: CORE QUESTIONS

Question 21: Core 3: Analysis and Management of Community Health

This question was generally quite well answered. The majority of candidates interpreted the question correctly and were able to provide a broad overview of the health status of Australians and discuss three priority areas for government action.

It was disappointing that some candidates referred to a stereotypical view of various groups and populations in Australian society. Along with this, an unrealistic view of what the government should do or is able to do, was reflected in poorer responses.

(a) Outline the current health status of Australians.

This question required candidates to provide a broad overview of epidemiology, major causes of sickness and death and possibly relate this to the major determinants of sickness and death. The limited space provided to answer the question appeared to create some difficulty for many candidates, in condensing the content into a concise, summarised form.

The majority of students answered the question appropriately focussing on particular aspects of health status, ie epidemiological statistics, major causes of sickness and death, general health trends. Many candidates presented a depth and range of information pertaining to health status in the brief space allocated. There was a range of styles in the presentation of information, the most effective and efficient was a summary or point form response.

The better candidates were able to provide a detailed outline referring to relevant terminology, expressing their answer in terms of epidemiological data, statistical trends, major causes of sickness and death and in some cases, the major determinants of sickness and death. Better candidates displayed a depth of understanding by providing brief statements of explanation to support their facts and information. Some of the better candidates used mindmaps or plans to guide the content focus and structure of their answer. For example:

... plan	– lifestyle diseases	– life expectancy increased
	– medicare	– hospital use increasing
	– population inequality	– changes

... many groups and sub-populations such as Aboriginals, rural dwellers and migrants are not achieving the same health status as the general population. Examples of this are Aboriginals have a lower life expectancy, 12–20 years less than the rest of the population. However despite the decrease in infectious diseases in the Australian society, we are seeing an increase in lifestyle diseases such as cardiovascular disease, cancer and diabetes type 2. Funding for health has increased with \$42 billion being spent in the 1996–97 year. Access to health care has increased and health promotion has led to a decrease in smoking levels, increase in physical activity within the Australian society. All of this has affected Australia's health status.

The current health status has been improving since the early 1900. Life expectancy for males has risen from 55 to 74 in 1985. Infant mortality has decreased thus more children are living after birth, with only 8.8 per 1000 in 1985 compared to 103.8 per 1000 in 1901. This has resulted in an increasing number of elderly people in the community, we have an aging population. Communicable diseases have significantly decreased while lifestyle diseases now account for about 75% of all deaths. We have good access to both institutional and non institutional health care facilities. Due to an increase in immunisation and health promotion we are changing our behaviours and living for longer. Injuries are the main killer in the 1–24 year age group, motor vehicle accidents being a main contributor. Deaths from lifestyle diseases are decreasing over the past 5 years.

The average responses from candidates provided an outline in general terms only, using some reference to key terms. They lacked the depth of analysis in terms of using supporting statements to follow factual information. For example:

Australians are an aging population they are living longer. Australian men have high mortality rates from motor vehicle accidents while Australian women have a high incidence of breast cancer. Cardiovascular disease is a main cause of death and cancer is also. There is a high incidence of suicide in the 15–24 year age group. More Aboriginals are dying from poisoning and infections. There are young children drowning.

The current health status of Australians shows that Australia is on par with other western countries in the world regarding life expectancy and socioeconomic status. The current life expectancy for males and females is about 76 and 80 years respectively. The current health care system means that there is less division between socioeconomic groups. This combined with high public education has resulted in an informed and healthy Australian society.

(b) *By considering the current health status of Australians, identify THREE priority areas for government action. Give reasons for selecting each as a priority area.*

The question required candidates to identify three priority areas for government action and discuss reasons for the selection of each area. A wide range of priorities were selected, some of which were less relevant and appropriate than others. The focus of this question was to provide reasons for selecting particular priority areas. These justifications varied considerably in terms of their quality, and reflected the candidates depth of knowledge and understanding of the need for health promotion and community action. Most students were able to select priorities and formulate a discussion relating to reasons why they were priorities for community health.

The better candidates were able to select appropriate and relevant priorities for government action. Many of the excellent answers showed a depth of understanding through relevant recent sources and referred to the 'Better Health Outcomes for Australians' document and identified priority areas from the document. Candidates in the excellent range gave several comprehensive justifications to support their choice of priority areas, discussing each individually with sound reasoning processes. Some of the better responses referred to the four areas in the 'Better Health Outcomes for Australians' report and specifically outlined the reasons why these priorities should be addressed by the government, ie degree of impact on health status, availability and effectiveness if interventions, cost to the community and potential to reduce health inequalities. For example:

Better Health Outcomes for all Australians (1994) identified four priority areas that were considered priority areas for government action. Three of these are cardiovascular disease, cancer and injury. Cardiovascular disease including stroke, is the leading cause of death in Australia. It kills approximately 41.7% of males and 48% of females. It is considered a priority area because of the high degree of direct and indirect costs to the community as well as the effectiveness of previous

interventions from the government. Cardiovascular disease is largely preventable and can be effectively reduced by government action. Cancer is the second highest cause of sickness and death and is a priority area because of its exponentially increasing incidence ...

... the current health status in Australia shows that there is a large number of people in our community dying from lifestyle diseases such as CVD (44%) and cancer (26%) of all deaths. Governments have seen the need to address this problem by reorienting health services to preventative and health promotion activities. CVD costs our country about \$3.5 billion each year while risk factors including smoking cost the country \$3 billion and diet \$3.3 billion. These lifestyle diseases have become a priority area as they are easily preventable by sustaining a healthy lifestyle. The controllable lifestyle factors such as not smoking, eating a balanced diet, exercising regularly and decreasing alcohol can significantly decrease CVD deaths. Injuries are a priority area as they are the leading cause of death in the 1–44 year age group. They account for about 24% of handicaps and 13% of hospital admissions. Motor vehicle accidents accounts for about 39 years of potential life lost and \$6 billion each year by the government. Injuries are mainly preventable and can be reduced through effective government action like drink driving campaigns and laws about helmets and swimming pool fences.

The average responses from candidates were generally able to select three relevant priority areas and give clear reasons to justify their choice of priorities. In most cases the depth and quality of discussion to justify selection was limited to one or two points. Discussion surrounding the priority areas was less comprehensive and lacked substantial evidence to support statements. For example:

... youth suicide, there has been a rapid increase in people aged 15–24 years. These people are often lonely and need help. Unfortunately not all of them feel as though they can get help that is specific to their needs. Young people need to know more about where to go to get help. Some suicides may be drug overdoses so young people need to be further educated about the effects of drugs.

Accidents and injuries occur everywhere, in the home, work, schools and especially on the roads. The government must select this as a priority area as the numbers are inclining. Accidents and injuries include road accidents, burns, falls, drowning and even suicide and work injuries such as RSI. The government have taken action in relation to road safety awareness campaigns about reducing speed, drink driving and fatigue. The government needs to keep it as a priority to keep our roads safe through RBT, speed cameras, double points on long weekends.

Question 22: Core 3: Analysis and Management of Community Health

This question covered a diverse range of content from the syllabus and gave students the opportunity to display both the depth and breadth of their knowledge. This question, however, was generally poorly answered. In part (a) and part (b) the majority of students were able to write an average response based on general rather than specific knowledge. Part (c) clearly distinguished between those students who understood the Ottawa Charter principles and how they link to the management of a global health issue and those students who had a limited understanding of the Ottawa Charter.

(a) *Sexually transmitted diseases have become a major community health problem in the 15–30 age group. Discuss reasons why this has occurred and how its impact on the community can be reduced.*

This question required students to discuss reasons why STDs have become a community health issue in the 15–30 age group and describe how its impact could be reduced. While the majority of students were able to identify some reasons for the increases in the incidence of STDs, only the better students were able to link the immediate causes to the underlying social determinants such as the increased independence of youth, changing social values, changing role of women and media pressure.

The better students were able to discuss a range of reasons for the emergence of STDs as a community health issue in this age group and identify a number of strategies to reduce its impact on the community. For example:

...greater independence of youth results from more mothers entering the workforce, less time spent at home thus greater responsibilities for youth that they are not ready for. Modern day society has been affected by less stringent values and morals promoted in the media e.g. movies with explicit sex scenes. STDs have increased as a result of unprotected sex with multiple sexual partners. Low socioeconomic groups with lack of education is also a contributing factor. Students have been given greater freedom which has led to a higher state of youth becoming sexually active at a younger age.

STDs can be reduced by promotion of safe sex practices, particularly within the setting of schools with the focus on youth before they actually make unhealthy lifestyle decisions. The impact can also be reduced by censorship and changing the time allocation for movies and TV shows, legislation about informing partners of any STDs that you have and making condoms more readily available ...

The average responses tended to cite a few reasons for the increase in the incidence of STDs in this age group with a general discussion of reduction strategies. For example:

... reasons include multiple partners, having unprotected sexual intercourse and the sharing of needles

... the impact of STDs can be reduced by health promotion aimed at young people to increase their awareness of STDs. Also increasing the availability of condoms would make them easier to get therefore prevent the transmission of STDs ...

Reasons why STDs have become a major community health issue in the 15–30 age group is because sexual relationships with other people is greater in this age bracket. Today, people seem to have more than one sexual partner. The sharing of needles and syringes and not having safe sex, that is, using a condom are also reasons. People are not telling their partners about other sexual relationships or whether they have STDs. This can be reduced by:

- having safe sex such as using a condom
- not sharing needles or syringes
- having one sexual relationship

(b) *There is a range of health services and information available to the individual. What factors would you consider when deciding on the suitability of health services and information?*

This question required students to identify factors to consider when determining the suitability of health services and information for the individual. A number of students relied on general knowledge and listed a limited number of factors with little or no discussion or focussed their responses on health services or health information only.

The better responses identified a range of factors addressing both services and information such as the quality and reliability of services and information, relevance of the information, cost, qualifications, location and type of service or information. The better responses included some discussion of each factor and related it to individual needs. For example:

There are a number of factors that need to be considered when deciding on the suitability of health services and information such as, the reliability of the source of the information, access to health services, the cost of both information and services and, the type of information and services. The individual would have to look at the factors as well as the suitability to their own needs e.g. type of information and services needed.

The service or information should always be checked. The source needs to be reliable and respected. Information offered by the media is often sensationalised and not always truthful. Information should be researched to establish its credibility.

Average responses discussed in general terms a number of relevant factors relating to both services and information. Some students listed a number of relevant factors often posing them as questions. For example:

The factors I would consider when deciding on a health service would include:

- cost: will I be able to afford the service and can I claim for it?
- convenience
- how I was treated: was the service what I needed?
- qualifications: is the doctor or service recognised and qualified to treat me?
- reliability: can I rely on the quality of the information or service?
- waiting period: Will the service or information be available when I need it?

The reliability of the information could be obtained from a certified practitioner or other accredited health worker, depending on the individuals needs:

- Doctors and practitioners should have obtained suitable qualifications
- Financial state – a person should seek services and information they can afford
- Health information needs to be accurate and up to date.

- (c) *Identify TWO principles from the Ottawa Charter for health promotion and show how they apply to the management of ONE global health issue.*

In this question students were required to identify two principles of the Ottawa Charter and link these to the management of a global health issue. The majority of students were able to describe a global health issue but had difficulty relating the management strategies to principles of the Ottawa Charter. Most candidates used the 'Greenhouse effect' as an example of a global health issue.

The better responses established a clear link between a number of strategies and two principles of the Ottawa Charter in the management of a global health issue. For example:

... the greenhouse effect is a serious and threatening global health issue in this day and age. To manage this problem we can apply the principles from the Ottawa Charter.

1. Develop personal skills for behaviour change – By developing our own personal skills we can alter or correct certain behaviours which contribute to the Greenhouse effect. For example educating others about the effects of using aerosols and CFCs, and learning about alternative products can decrease the amount of CFCs into the atmosphere which in turn lessens the Greenhouse Effect. Preserving energy such as hot water, turning off lights and taking public transport can be personal behaviour changes that will lessen the amount of CO₂ entering the atmosphere and also help minimise the greenhouse effect.

2. Create supportive environments – By creating supportive environments we can decrease the Greenhouse effect. Supportive environments include: positive media influence, ie. Advertisements which encourage the preservation of forms of energy. The shopping centre environment can be made supportive by only stocking CFC free products, or advertising the CFC free products in favour of those which do not contain it. The home environment can be supportive by individuals, such as parents, encouraging others to preserve energy and not use harmful fertilisers, etc.

Excellent responses included similar discussion for the two principles and identified a number of strategies in the management of a global health issue.

Average responses identified two principles and linked these to one or two strategies in the management of a global health issue. In some cases responses included good discussion of management strategies for only one principle with poor discussion of the other. For example:

One Ottawa Charter principle which applies to this problem is building a healthy public policy. By introducing healthy public policy the ozone layer can be managed. In 1989 the Australian government banned the production of aerosols using CFCs. They also encouraged a fade out of CFCs used in plastics. Legislation about car CO₂ outputs and industrial pollution has also improved the problem. Another Ottawa Charter principle is to strengthen community action. Some communities have rallied together to create environment protection groups such as the Youth Enviro Council. This group tries to educate the public about the damage aerosols and fossil fuels do to the environment.

Question 23: Core 4: Movement Skill and Performance

The standard of answers for this question was markedly different between the two parts of the question. Part (a) responses were generally inferior to those of part (b). Part (a) was poorly answered with many students unable to demonstrate a clear understanding of the word 'appraisal'. Many students did not appear to be familiar with the terminology used in the syllabus.

Part (b) was generally well answered with the majority of students able to demonstrate an understanding of the three key areas – training, diet and ergogenic aids. Of these three areas, diet was explained well but many students were not as clear in their understanding of the terms training and ergogenic aids. The better answers were able to demonstrate a very clear understanding of the terminology and relate the key areas to endurance performance.

(a) *Describe the process that you would use to appraise the quality of an individual's performance within a group context.*

This question required students to demonstrate an understanding of the process of movement appraisal through discussion of subjective and objective strategies. Students needed to demonstrate the role of criteria and how these could be applied to an individual performer within a group performance.

Many students did not understand the term 'appraisal' and went on to discuss praise as a form of feedback or reinforcement. Many students also discussed the characteristics of skilled versus unskilled performance such as temporal patterning, anticipation and timing. Those who did demonstrate understanding of appraisal were able to identify specific criteria and give examples of how they might be applied in a specific context, eg a game or a dance performance.

Better responses made clear reference to objective and subjective appraisal and were able to demonstrate ways of focussing on an individual within a group performance. They provided examples of ways that the individual could be appraised both as an individual performer and as a contributor to the group as a whole. This involved identification of specific criteria for group and individual appraisal. For example:

... 1. objective appraisal 2. subjective appraisal – Objective appraisal is where you would determine the individual you were assessing and the assessor would have no influence on the end result or subjective appraisal where the assessor or the criteria play a part in the assessment outcome. For the individual you would establish set criteria that you would look at and allocate a mark ie for that particular activity it may be a qualifying time etc. You could use norm referenced assessment and compare the performer to the other athletes (a percentile ranking could be used). When using tests you would have to make sure they are valid (testing what they are supposed to be) and reliable (if the test was done in the same conditions would similar performance produce similar results).

... objective appraisal is based upon results. These results may be measured by comparing them to the norm, percentile ranks and prescribed criteria. In Gymnastics the judges are given a set criteria to follow which would cover aspects of the performance such as degree of difficulty, combination of skills, number of errors and timing.

... the individual can be assessed in a group situation by looking at aspects of play such as flow, rhythm, anticipation and their overall role in the performance. Results can be reflected by time or distance and compared to the others by using norms or percentile rankings.

Average responses contained general descriptions of appraisal methods without demonstrating a strong understanding of the appraisal process. Many simply identified set criteria or desirable performance elements within a particular sport. Many neglected the role subjective observation could play or identified very broad non specific criteria. For example:

... if you look at a footballer in a match – statistics such as how many kicks, marks, handballs, goals will usually express how they performed.

... there are subjective and objective ways of appraising performance. I would look at how many baskets were scored, fouls and number of successful assists.

... the judge would assess the individual on how well he/ she interacts with the group. Factors like shape, relationships, movement, would need to be considered. Also the judge would need to consider how flowy and smooth the movements are of the individual when interacting with the group.

(b) *Discuss the relationship of EACH of the following to endurance performance:*

- *types of training*
- *diet and performance*
- *ergogenic aids.*

This question required students to apply their knowledge of types of training, diet and ergogenic aids to the particular context of endurance performance. Most students were able to generate some discussion of each of the three key areas required and better students demonstrated a clear link to endurance events. Answers included a wide range of discussion with many discussing continuous training, fartlek training, circuit training, aerobic training, carbohydrate, fat, protein, mineral supplements, salt, alcohol, blood doping, altitude training and amphetamines. Many students had a very narrow view of ergogenic aids and focused their discussion on illegal methods of improving performance with ergogenic aids without discussing methods such as altitude training.

Better students clearly demonstrated a broad and in depth knowledge of the three key areas and clearly linked this knowledge to endurance events such as marathon running, triathlon or long distance swimming. For example:

... Endurance performance requires the aerobic energy system, as being predominant. This performance requires a repetitive sustained effort over a long period of time eg 3–4 hours. Continuous training would therefore be the best training combined with aerobic training. This training involves positive sustained effort with heart rate at 130 – 150 beats per minute which can be kept up comfortably for 3–4 hours.

Better students also related types of training to the principles of training. For example:

... Circuit training – circuits applying progressive overload principles so as to increase the VO₂ max components(ability of the body to use oxygen increasing oxygen uptake). Exercise should be on large muscle groups and ones specific to the endurance event eg legs and arms for long distance swimming, cycling or running. By using large muscles it needs more oxygen which gets the heart and lungs to work harder thus helping endurance performance:

... Caffeine may be considered by the athlete as it reserves glycogen stores by mobilising fatty acids.

Better answers were also able to discriminate between useful strategies and those which did not apply to endurance performance. For example:

... Ergogenic aids are substances believed to improve performance. Salt is taken in the belief that is lost in sweat however this is inaccurate as a low salt diet is better suited for an endurance athlete. Sugar taken before an event actually inhibits performance by increasing insulin levels, decreasing energy availability.

Average responses tended to discuss the three areas in general terms without specific reference to their effect on performance. If links were made they were brief and often relied on common beliefs as opposed to scientific fact. For example:

They will need to stay hydrated and use not only water but also glycogen and carbohydrate based drinks to do this. Those that will assist an endurance athlete would be caffeine which is a CNS stimulant and keeps athletes alert. Diuretics which increase urinary excretion, amphetamines which psychologically and physically act as CNS stimulants.

Types of training needed for endurance performance would have to have an adequate aerobic training base – the ability of the body, muscles to use oxygen. To develop aerobic fitness you would need to work specifically on your cardiovascular fitness for the sport you were training for.

Question 24: Core 4: Movement Skill and Performance

This question examined a very narrow range of the syllabus. Part (a) was answered quite well but part (b) posed significant problems for many students.

(a) *Discuss how gender may affect physical performance.*

This question required candidates to identify a wide range of gender differences. These differences could be physical and/or psychosocial. The gender differences needed to be related to specific performance parameters. Most students were able to identify a range of physical differences with strength, body fat and flexibility the most commonly discussed. Many students also mentioned such things as emotional differences and the influences of sex role stereotyping. There were a disturbing number of candidates who presented very sexist views in relation to gender and physical activity.

The better responses demonstrated a superior understanding and scope of gender differences. They included physical and often psychosocial examples. For each gender difference identified, they were able to determine its impact on physical performance, in most cases providing examples. For example:

Males for example have a naturally higher strength or power to weight ratio than females, enabling them to be more suited and often better in events that require these components such as sprinting or weight lifting. Women on average, carry a higher percentage of adipose tissue. Men therefore have a greater muscle to fat ratio or lean body mass. Women therefore, are disadvantaged when they need to overcome gravity in performance. This is particularly evident in high jump.

Males have a larger aerobic capacity than females. They generally have a larger heart and thus a larger stroke volume and cardiac output and are able to supply oxygen to their working muscles more efficiently. A larger blood volume means a greater supply of haemoglobin and therefore greater oxygen carrying capacity for better endurance or aerobic performances.

The average responses tended to discuss a range of gender differences without showing their relationship to performance. The responses may have been narrow in their scope of identified differences if a relationship to performance was indicated. For example:

Men are stronger and women are more flexible. Most men are taller than women and women have more body fat. There are hormonal differences such as testosterone in males develops strength.

Females are generally better at agility and flexibility which is why they perform better at gymnastics and dance. Males have a lean body mass which makes it easier for men to produce more muscle than women.

(b) *You have been asked to observe a fitness session to assess the safety of the activities.*

(i) *Identify the criteria you would use to determine contra-indicated exercises.*

This question required candidates to understand the concept of contra-indications and to justify to some extent, the reasons why exercises may prove unsafe. A range of criteria needed to be indicated to demonstrate a depth of understanding. The term 'contra-indicated' appeared to cause problems for candidates, given the high number of non-attempts for this question. Most candidates who attempted the question were able to identify at least one reason for the contra-indication. The most commonly used reason was over stretching or rapid stretching.

The better responses identified at least three criteria for contra-indication, using appropriate terminology or explained in enough detail to demonstrate a good understanding. For example:

Contra-indicated exercises are those which cause injury and are therefore not recommended. The criteria that could be used would be; excessive movements involving hyperflexion and hyperextension eg. Neck rotation. Ballistic movements involving fast, uncontrolled movements such as swinging and bouncing. Also movements involving an imbalance in muscle development and involvement.

- Hyperextension involves pushing the joint beyond its normal range of movement eg hyperextension of the knee.
- Ballistic movements – these activate the stretch reflex and involve bouncing of a particular movement eg, bouncing while attempting to touch the toes.
- Repetitive – if the exercise was repetitive, and was continually putting stress and strain on a particular part of the body.

The average responses listed some dangerous exercises in general terms. Another approach of the average answer was to outline the factors needed when prescreening or checking for indicators such as pain or the way an exercise was performed. For example:

Straight leg toe touch strains the muscles in the lower back. Hyper extension pushes the joint past its normal range of movement causing damage to the lower back.

(ii) *Select two contra-indicated exercises and describe the dangers that may result.*

This question required candidates to have some understanding of part (i). Many students seemed confused between the two parts. The candidates' responses were often spread across the two sections with a lot of overlap and little differentiation. As a consequence there tended to be many non-attempts in both parts. These candidates essentially lost eight marks as a failure to understand or remember the syllabus term 'contra-indicated'. Candidates needed to specifically identify an exercise rather than a criteria. For example, ballistic stretching was often listed as a criteria but was again mentioned as an exercise. The dangers relating to the contra-indicated exercise needed to be written in specific terms.

The better responses used clear and accurate language in their selection of the specific contra-indicated exercises and linked the exercise clearly to the potential dangers. For example:

Forced Hyperextension of the back – The back is forced into a compromising position resulting in the compression of discs between the lower lumbar vertebrae ... resulting in ligament and tendon damage, muscular spasm, strain and pain.

Rapid Toe Touching – this uses a ballistic movement and thus activates the stretch reflex. Hence the athlete as they try to stretch the muscle are activating it to contract which greatly increases the risk of damage such as strains and damage to hamstrings as well as possible lower back injury such as disc compression.

The average responses tended to repeat the criteria already identified in part (i). They may also have lacked specificity in their description of an exercise or described the potential dangers in general terms. For example:

Ballistic exercises can result in the stretch reflex, an involuntary muscle contraction and or torn muscle fibres.

Situps with your legs straight out causes great strain on your lower back and may pull muscles.

Jumping may cause the knees to become sore from jarring, you could roll the ankle when landing or snap the Achilles tendon.

SECTION III: OPTION QUESTIONS

Question 25: Community Health Issues

This question was generally answered poorly. Many candidates answered the question, even though they had not studied this option as part of their HSC course. Most candidates attempted parts (a) and (b), but many candidates answered part (c) poorly or not at all.

- (a) *Interviews are a commonly used fieldwork technique. Outline the issues to be considered when designing and conducting an interview.*

This question required students to have an understanding of designing and conducting an interview as part of fieldwork techniques.

The better responses referred to a range of approaches to interviewing such as structure and unstructured; qualitative and quantitative etc. They also demonstrated higher order understanding of the issues referring to purpose, target audience and method of delivery in their answer. For example:

Issues to be considered when conducting interviews and designing them, is to decide whether they are to be structured or unstructured, meaning whether they will have set questions to be followed, or if the interview will follow a more personal, free–answering subjective style.

The average responses included a general discussion of interview techniques and showed a basic understanding of the issues involved. Candidates tended to focus more on conducting the interview rather than on outlining some of the issues to consider in the design. For example:

When designing and conducting an interview it is important to have a set of pre prepared questions with a goal in mind. As an interviewer it is important to have some background knowledge of the subject you are going to produce the interview on.

- (b) *Examine the relationship between socio-economic status and the incidence of health risk factors in a specific region or community that you have studied.*

This question required candidates to identify a specific region or community, describe the socio-economic status of the region or community and link this to risk factors and related health issues. Candidates were required to have an understanding of the indicators of socio-economic status, eg education, income and occupation.

Most candidates identified a region or community and showed a basic understanding of some of the health issues in that population. The majority of candidates were able to relate low socio-economic status with poorer health but did not show any depth of understanding. Many candidates generalised about the risk factors and health status of their selected region or community.

The better responses clearly discussed the region or community studied, showing an indepth understanding of socio-economic status and the links to risk factors and health issues. For example:

A community's lower socio-economic status can have a large impact on health. For example. Aboriginal communities typically experience poorer education, higher unemployment and lower income. This can result in poorer nutrition, greater levels of alcohol abuse, poorer housing and cramped living conditions. As a result, Aboriginal communities have higher levels of chronic disease such as diabetes type 2, liver damage and are more prone to infectious disease.

The average responses referred to indicators of poorer health but did not link this to socio-economic status and health issues in the region or community. For example:

The Aboriginal community has a lot of problems with their health because of the types of living they have available and being in a small community it is easy to contract diseases from other people.

(c) *Discuss how the provision of health services may address the needs of the aged and people with disabilities.*

This question required candidates to discuss specific characteristics and needs of the aged and disabled, as well as identifying how a range of health services may address those needs.

Most candidates were able to identify that being aged or disabled required special needs. However, they did not demonstrate a thorough understanding of the unique health issues for these populations and the types of health services required to accommodate them.

The better responses included higher order discussion referring to the changing age structure and reasons for service demands, then linked these with specific needs. For example:

Due to the changing age structure attention needs to be paid to the amount of health services available to the elderly and disabled. The disabled are going to have a higher demand on nursing homes and rehabilitation centres. Interventions such as meals on wheels will be in high demand as well as services such as physiotherapy and chiropractors.

The average responses referred to a limited number of health issues for the aged and disabled and listed a lower order range of health and other related services relating to the target groups. Candidates tended to focus on general knowledge issues such as wheelchair access, nursing homes and transport. For example:

The provision of health services could address the aged by providing them with better equipped nursing homes or even in home care such as meals on wheels. The disabled require special considerations such as ramps leading into buildings.

Question 26: The Sociology of Games and Sports

This question was generally answered well. Many candidates would have had additional exposure to the syllabus content as it was regularly reflected in the media. This provided them with many examples from which to draw. Part (a) was generally answered better than part (b) because the question provided more structure from which candidates could format their answer. Part (b) answers often lacked detailed discussion

- (a) The State government is asking for public comment on how it will use funds for sport and recreation. Prepare a response to the government that
 - (i) Identifies priority areas for funding
 - (ii) Outlines the potential benefits of each priority area for the whole community.

Part (a) (i) required candidates to identify a range of areas for funding which they could then justify as priority areas. Most candidates were able to identify priority areas with a reasonable discussion outlining the necessity for each area.

The better responses included detailed discussion and excellent justification of relevant priority areas. Each area was specifically discussed rather than outlined in a general statement. For example:

One such area is the development of increased facilities and opportunities for sport and recreation for the elderly population. This is increasingly important as the population is ageing and in an attempt to minimise the conditions associated with physical inactivity, eg cardiovascular disease, there is a need for more facilities and motivation in an attempt to increase elderly population in low intensity exercise.

Another priority area exists among the younger members of society, from the age of 10–25 years. Studies have shown that physical activity declines rapidly after the age of 20 despite proven facts that regular physical activity improves the functioning of the heart and helps develop strength and immunity. Children need to be involved in regular physical activity at an early age and need to be continually encouraged and motivated to persist with activity to decrease the risk of lifestyle diseases related to obesity, high blood pressure and a lack of physical fitness, which can all result from a lack of physical activity and sport.

The average responses discussed priority areas in general terms using examples. Often these examples were related to issues from their local community. Some understanding of the priority areas was demonstrated but the responses lacked detailed justification. For example:

Priority areas for funding in sport and recreation are more recreation areas like basketball courts and skate parks that don't cost money to use. Also more sporting clubs to get people involved in sport and exercise activities. The government also needs to provide more social sporting clubs and events, that is not serious competition, but just for fun and regular exercise.

Allocation of funds to schools would benefit the whole community. This is because it would give children the opportunity to participate in sport and it would give them feelings of worth and self esteem.

Part (a) (ii) required candidates to outline the potential benefits to each of the selected priority areas. Most candidates were able to discuss a range of benefits including physical, social, economic, local community and government benefits in broad terms.

The better responses included excellent discussion of each potential benefit and clearly linked these to each priority funding area. For example:

... expected improvements could be increased self esteem, being able to keep a constant healthy weight, being healthy reduces the risk of CVD and other diseases. Through participation in sport females could become an important part of society by contributing to it by participating in it.

The average responses tended to have a good discussion of the benefits of three or more benefits. These benefits included improved health status, decreased CVD, less crime, less violence, increased socialisation, a happier and healthier community, greater opportunity for sporting recognition.

(b) *Professional sport really isn't sport at all.*

Discuss this statement in relation to how economics influences the nature of sport.

This question required candidates to give a detailed discussion of the economic influences and their impact on professional sport. Most candidates were able to identify how economics influences sport, using relevant examples from an historical and/or contemporary perspective.

The better responses included excellent justification of the statement with a detailed discussion of several economic influences. Some candidates were also able to argue both the positive and/or negative economic influences. For example:

Professional sport in the 90's isn't really sport as much as it is a career. Sponsorship and funding has increased the use of sport as the sole career for many athletes. Through excellence in sport, athletes reaching top levels of their chosen sport no longer have to pay their way to games and training, they are being sponsored and effectively paid to play.

A major negative aspect is the increased pressure surrounding the professional athletes to perform. Many fall to the pressure and their pure talent is wasted. Often in order to cope with the pressure athletes turn to drugs in order to gain the winning edge and reap the financial benefits. The role drugs play in sport has been detrimental to professional sport, reducing the beauty of competition.

The average responses were able to provide a general discussion with limited links to the statement. Some candidates included examples to support their discussion. For example:

The financial effects of professional sport have introduced the media's effect with the media becoming more involved in sport because of financial incentives.

The more media coverage sport has, the more sponsorship they receive. Sponsorship is becoming vital to the continuation of sport.

Question 27: Two social health issues – Drug use and HIV/AIDS

There were some sections of this question that were answered quite poorly, with the majority of responses showing a limited depth of understanding of the related syllabus content. Many candidates produced general information that was not directly related to the question. The candidates who performed well displayed the ability to analyse and evaluate the specific issues related to the question. Due to the broad application of part (a), this question gained the stronger responses. In part (c), there was confusion about the syllabus term ‘abstinence’ as an alternative to drug use. The nature of the three part question resulted in some hurried responses due to ineffective time allocation by candidates.

- (a) *The government has considered a proposal to implement HIV screening for all adults. Discuss the community implications of this proposal.*

This question required candidates to analyse a proposal to implement HIV screening for all adults, identify and then discuss the community implication of such a proposal.

The better responses included a detailed discussion of a wide range of relevant community implications, including social, emotional and financial factors. These candidates displayed a clear understanding of the issues and provided excellent support for their position. Some candidates included both positive and negative implications for the community. These candidates displayed a sound understanding of the nature of HIV screening. For example:

HIV screening will result in a decrease in HIV transmission as people diagnosed as HIV positive will become aware of their status and they may reduce their risk taking behaviours such as unsafe sex and sharing needles which will reduce transmission. However there is no guarantee that they will adopt safer behaviours.

Cost and confidentiality are two major issues. Currently screening is free although it costs the government \$8 per test. The results are confidential, but if found to be positive, the person must inform their sexual partner.

The average responses included a more general discussion of relevant community implications. Some understanding of the issue was displayed but the responses had limited detail. For example:

HIV screening will cost money, which has to be found somewhere. This will increase the burden on the taxpayer.

The people may not want to be screened for fear of the unknown and may refuse to have the test done.

The testing will make the community more aware of the problems with HIV and people will become more aware of the disease.

- (b) *People with HIV will contract other serious related conditions in the final stage of infection. Outline the nature of these AIDS related conditions.*

The question required the candidates to describe the nature of AIDS related conditions. The majority of candidates were able to include some form of explanation about the function of the immune system in the final stage of infection.

The better responses included a detailed description of at least one of the three major categories of AIDS related conditions such as Kaposi's Sarcoma, PCP and neurological disorders such as dementia and meningitis. Other candidates provided a list or explanation of all three broad categories. For example:

Pneumoastic Coranii Pneumonia (PCP) is a form of pneumonia that only affects those with HIV. It is an infection of the lungs that causes inflammation of the alveoli and the secretion of mucus.

As HIV progressively destroys the CD4 lymphocytes of the immune system, these opportunistic infections will cause serious illness and eventually death. They are called opportunistic because they take advantage of the opportunity to invade the weakened immune system.

The average responses included a more general description of AIDS related conditions with some explanation of the diminished function of the immune system. These candidates did not identify specific AIDS related conditions, but provided a good description of the nature of cancers and pneumonia's. For example:

Pneumonias, where a patient can catch a cold but the immune system is too weak to resist it, so it progresses to an infection of the respiratory system.

(c) *Evaluate the effectiveness of abstinence as an alternative to drug use.*

This question was answered in a variety of ways, but generally candidates did not provide an effective evaluation of abstinence as an alternative to drug use. Many candidates misinterpreted the term 'abstinence' and made references only to sexual behaviour. Some candidates also discussed the question purely in relation to the drug treatment of HIV/AIDS as a continuation from parts (a) and (b).

The better responses included a detailed evaluation of the effectiveness of abstinence as an alternative to drug use. Most responses evaluated abstinence in the light of assertiveness and stress management or provided a good discussion of the advantages and disadvantages of abstinence in comparison to drug use. Some discussed abstinence in relation to the harm minimisation model. For example:

Legal drugs are responsible for over 97% of all drug related deaths and indirectly cost the community millions of dollars in terms of lost productivity, relationship breakdown and illness. Saying no to these drugs would significantly reduce these costs.

In the case of the readily available and accepted legal drugs, abstinence may not be realistic. It may be better to provide education and support for the individual to reduce the harms associated with its use and to promote safer use.

The average responses included a wide variety of approaches to answering the question. One common feature was that the discussion was general and the level of evaluation was significantly lower than the better responses. Many average responses linked the reasons for drug use to specific alternatives, while some generated general discussion about drug use. For example:

Some people take drugs because they are bored. They could join a sporting team or participate in a high adventure activity such as bungee jumping.

Those people taking heroin and other illegal drugs risk addiction and sickness. They would be better off quitting or becoming abstinent. Maybe they could take up an adventure sport to get their buzz.

Question 28A: Biomechanics of Human Movement

There was a wide range of responses to this question. The better answers exhibited an in-depth understanding of biomechanical principles and the ability to apply these principles to the identified performance parameters. Parts (a) and (c) provided the opportunity for candidates to extend themselves. There were very few non-attempts indicating a good set of questions and adequately prepared candidates. There was, however, a significant number of students who attempted to answer this question, seemingly without having studied the option at school.

(a) *Identify the types of forces involved in a tennis serve and explain how they can be used to maximise performance.*

This question required candidates to demonstrate process skills through the application of biomechanical force principles to a tennis serve. Most candidates were able to identify some types of forces involved in a tennis serve or at least, were able to explain some technical aspects of the tennis serve.

The better responses included a range of relevant principles with consistent use of appropriate terminology. They were able to apply these principles to serving in tennis and discuss ways in which the serve could be improved by employing the force principles. For example:

Rotational inertia is proportional to the mass and the radius or distance from the axis of rotation, which in this case is the player's shoulder.

The magnitude of the force on the ball can be maximised by increasing this component, muscular strength and also by increasing the radius of the lever arm, such as a longer racquet.

The average responses tended to restate biomechanical principles related to the force or describe the tennis serve. They were unable to apply force principles to maximising performance. For example:

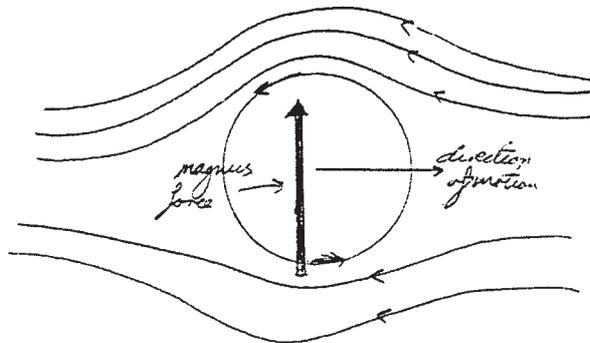
Newton's second law is that acceleration is proportional to the force applied. The arm should be straightened at the top of the serve.

(b) *Explain how imparting spin to a ball may affect its flight path.*

This was a relatively simple question for candidates who had studied the option. It required students to demonstrate an understanding of the generation of pressure differences on either side of a spinning ball, and flight path variations depending on the type of spin imparted. Most candidates were able to do this, while those students who did not appear to have studied the option simply gave examples.

The better responses not only included detailed explanations but also included excellent diagrams, which explained 'magnus force' and gave examples. For example:

For instance, in this case of backspin, since the bottom of the ball is spinning against the flow of air, there is a creation of higher pressure at the bottom of the ball rather than the top, as illustrated below.



Spin of the ball is constructive with airflow and low pressure is formed.

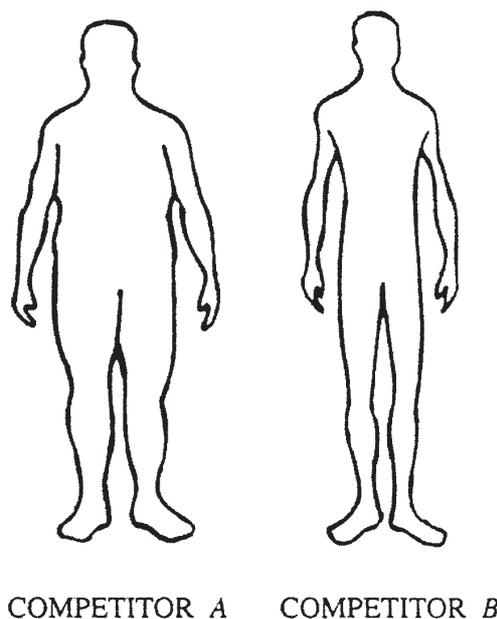
Spin of the ball is constructive with airflow and low pressure is formed.

Spin is destructive with airflow and high pressure is formed.

Average responses were unable to demonstrate that they fully understood the concept. Their explanations were weak and/or their illustrations were incorrect. For example:

When a ball flies through the air, it reacts with oncoming air creating a pressure difference. This pressure difference causes the ball to take a curved path.

(c) *Discuss how the principles of fluid mechanics will affect the following competitors in a swimming race.*



This question required candidates to demonstrate an understanding of drag and lift forces. They also needed an understanding of buoyancy differences dependent upon somatotype. Possible differences between swimming speed and body types needed to be discussed. Most candidates were able to identify competitor A as having more body fat and thus greater buoyancy. They were also more likely to suggest competitor B as the faster due to less resistance.

The better responses identified competitor A as an endomorph with a higher percentage of body fat than competitor B, an ectomorph. They discussed buoyancy forces and related them to the two competitors. They also discussed the influence that their body shapes would have on drag, and related this to potential speed. For example:

As fat is less dense than muscle, competitor A will experience a greater buoyant force than competitor B.

Because of the body shape of the competitors, they will experience differing amounts of profile drag and wave drag.

The average responses were more likely to look at buoyancy differences only, or to discuss how the shape of the competitors would influence their speed. For example:

Buoyancy is the ability of one to float. Competitor A would be a better floater because he has more fat. He is a true floater.

Competitor B has an advantage and will swim faster because he is a slimmer build.

Question 28B: Applied Anatomy, Exercise Physiology, Principles of Training and Fitness Testing Protocols

This question was generally answered well with a number of quality responses indicating that candidates studying this option had dealt with the content in some depth. However, part (a) confused many candidates with the word 'assist' causing some to explore incorrect joint actions through reference to synergy. Part (c) also saw a somewhat narrow discussion of physiological adaptations with a majority of candidates tending to discuss cardiorespiratory adaptations without demonstrating a particularly broad range of other types of training and their respective effects on physiological changes.

- (a) (i) *Identify how the pectoral muscles assist in a range of joint actions*
(ii) *Describe ONE strengthening exercise for each joint action identified in part (i)*

The better responses identified appropriate joint actions including adduction, and horizontal flexion. The word 'assist' also prompted the better candidates to explore the synergist/stabiliser properties of the pectoral muscles with the terminology including rotation and circumduction being identified. For example:

The pectoral muscle is the prime mover in the adduction and medial flexion, bringing the arms closer to the middle of the body at the shoulder.

The pectorals act as a synergist muscle in adducting the arm from above the head.

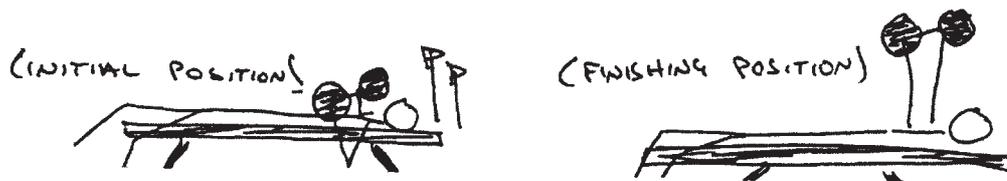
The better responses also gave correct strengthening exercises for the adduction and flexion movement with good descriptions of how the exercise is done and that resistance was conducive to enhancing strength. Many candidates used diagrams to complement descriptions. For example:

Bench press is a free weight exercise that involves lying flat in a supine position and pushing a weight upwards, with 75% 1RM used, this will strengthen the pectorals.

The average responses tended to identify joint actions through explanation, without using terminology, or confused the synergist/stabiliser capacity of the pectorals. Many used diagrams to demonstrate exercises without providing an explanation or description. For example

Pecs are stabilisers for rotating your shoulder.

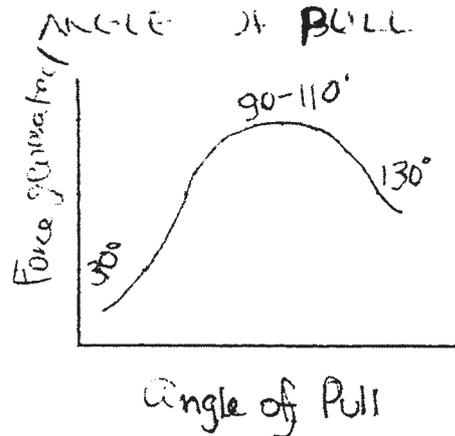
The pectorals are involved in bringing your arms down from above your head.



(b) Describe the factors that contribute to the biomechanical efficiency of joint action.

The better responses identified accepted biomechanical principles such as angle of pull, angular velocity, optimal length tension and mechanical advantage of levers. Many candidates used good diagrams in their description. For example:

The optimal angle of pull is 90–110°. This angle allows the muscle to exert optimal force and therefore is working at the most efficient joint angle



Most levers in the body are third class. A small contraction across the joint results in a speed multiplication at the resistance end. This speed multiplier is what makes the joint or fulcrum so efficient.

The average response had some detail of factors associated with joint anatomy but often lacked specific relationship to the efficiency of the joints action. For example:

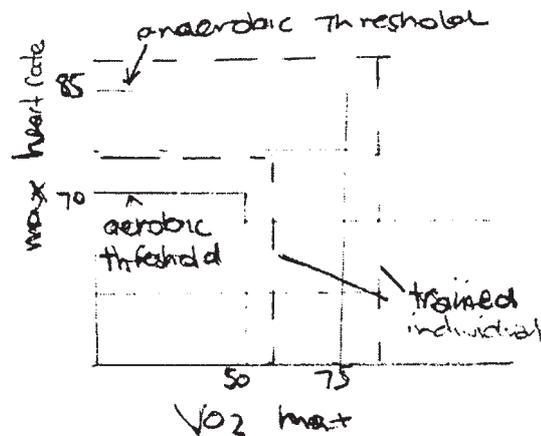
Synovial fluid makes the joint smooth and slippery making it more efficient in movement.

The stronger the tendons around the joint the more efficiently it moves.

(c) Discuss the physiological differences between a trained and an untrained individual.

The better responses discussed in detail, physiological adaptations between trained and untrained individuals, mainly focusing on cardiorespiratory adaptations. A small number of candidates broadened their discussion to include the recognition of other types of training eg. Strength training and the differences created between individuals. Many used good diagrams to assist discussion. For example:

The trained individual has a higher aerobic and anaerobic threshold. This means they can cope with workloads of much higher intensity without undue fatigue or lactic acid build up to reduce performance.



The trained athlete has a significantly higher max VO₂. Both stroke volume and haemoglobin levels have increased as cardiac hypertrophy causes increased fitness.

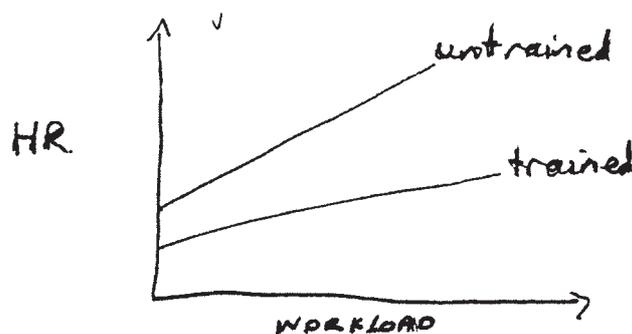
The average responses again took a rather narrow focus to this question addressing only cardiorespiratory differences without discussing any other type of adaptation. These responses tended to list a good number of relevant points, but provided little or no discussion to support their points. Other responses tended to focus on the characteristics of a trained individual rather than the physiological differences. For example:

Trained athletes have an increased

- VO₂ max
- haemoglobin
- cardiac output
- anaerobic threshold
- stroke volume

and a reduced resting heart rate because they are fitter, the trained athlete is less tired, has better muscle tone and is more alert.

The trained athlete has greater anticipation and timing than the untrained. They have temporal patterning, kinaesthetic sense and timing. They appear to have more time to decide and can go for longer periods without getting tired.



Trained athlete did not work as hard at the same workload.

Question 29: The Art and Science of Coaching

This question was in two parts. Part (a) which was 15 marks allowed for a broad interpretation which appeared to cause some candidates to lose focus on the key aspects of the question. Those being stages of skill acquisition, the individual abilities of the players and progression through the stages of skill acquisition. Part (b) also caused problems for some candidates who focused primarily on losing and the coaches role. They did not deal with coping with winning and the shared responsibilities of parents and athletes.

(a) *As a coach of a team you are required to cater for a range of individual abilities. Describe how you would ensure that all players progress through the stages of skill acquisition.*

This question elicited a broad range of responses with most candidates able to successfully answer some aspects of the question. Most candidates were able to identify the three stages of skill acquisition and the better candidates related coaching methods and training strategies to individuals as they progressed through these stages. Many candidates reproduced sections of the syllabus that they had rote learnt and did not adequately link this information to the question.

The better responses described the coach's role in progressing the athlete through the stages of skill acquisition. They acknowledged the individual needs and abilities of the player that must be catered for in achieving this end. For example:

The associative stage of learning is characterised by practice. The learner begins to develop temporal patterning through practice. The coach must provide information about technique to the learner, thus refining their understanding of the skill. Feedback in this stage will be both intrinsic (from kinaesthetic sense) and extrinsic (from the coach providing knowledge of performance and results). This feedback may be a motivational tool and would differ between individual players. Depending on their characterising on the skill and the individual, the coach may present practice that is massed or distributed, whole or part and feedback may be concurrent or delayed. Mental practice can be employed as the player moves towards the autonomous stage.

Other candidates took a different approach and focused on the individual needs and abilities of the player and how they would be catered for in the progression through the stages of skill acquisition. For example:

The age of the performer needs to be considered by the coach. While it is not always so, the younger children would most likely be in the cognitive stage of learning. This stage should be dealt with by the coach using demonstrations, frequent positive feedback and should be learnt in a closed environment. Veteran athletes will usually be in the associate or autonomous stage where there are fewer errors. Those in the associative stage would practice more with plenty of feedback from the coach. They would move to some open situations and would be able to recognise and feel their own mistakes.

The average responses covered either the stages of skill acquisition as they relate to the individual abilities or described coaching methods, motivational tools or aspects of a training session, but did not provide adequate links between the two. For example:

In coaching athletes of varying abilities the coach must consider the individual needs of the performer. These include the age, stage of learning, nature of the skills and the individuals reasons for participation.

The average candidates often listed relevant information but did not define the terminology involved in the question. They identified cognitive, associative, autonomous, whole versus part open and closed, knowledge or results and performance but did not demonstrate their understanding of these terms as they relate to the progression through the stages of learning.

(b) *As a coach, describe how you would manage the issue of 'coping with winning and losing'. In your answer, refer to the shared responsibilities of coaches, parents and athletes.*

This question proved to be a challenge for most candidates, and many seemed unable to answer the question in its entirety. The responsibility of parents and athletes were often discussed poorly by candidates, who often referred to parents and athletes as having a role but did not define or discuss this role. A significant number of candidates reflected on personal experience as either a coach or player resulting in many inappropriate responses.

The better responses were able to give clear descriptions of methods that coaches would use to cope with both winning and losing. They referred to the responsibilities in this regard for coaches, parents and athletes. The better responses referred to the refocussing of goals, feedback and reinforcement, motivation and codes of behaviour. For example:

Instead of placing emphasis on winning the coach should target other areas to use as a goal eg. Increasing the number of assists in basketball. This will improve the standard of play as well as give the athletes something else to focus on. Criticism should be constructive rather than destructive. Positive reinforcement should be given for reaching goals. When in charge of coaching a team who are consistently winning, the coach needs to refocus their goals in order to maintain motivation and desire to improve.

Under the guidance of the coach, parental support should be gained prior to the season via meetings where expectations and goals and attitudes towards playing and participating in the sport are discussed and agreed upon. Codes of behaviour may be developed for the coach, the player and the parents which will be maintained throughout the season.

The average responses tended to discuss coping with losing only and generally stated the need to have fun and not place an emphasis on winning. Many reworded the question and many cliches were apparent eg. It's not whether you win or lose. For example:

As a coach you need to prepare your team both physical and psychologically to winning and losing. You need to remind the team that winning is not everything and you play for enjoyment and self satisfaction. If the team is losing the coach needs to motivate the players and help to set goals for them.

The ugly parent syndrome was commonly cited but seldom explained.

ISBN 0 7313 4128 7



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