



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

2011 Personal Development, Health and Physical Education HSC Examination 'Sample Answers'

When examination committees develop questions for the examination, they may write 'sample answers' or, in the case of some questions, 'answers could include'. The committees do this to ensure that the questions will effectively assess students' knowledge and skills.

This material is also provided to the Supervisor of Marking, to give some guidance about the nature and scope of the responses the committee expected students would produce. How sample answers are used at marking centres varies. Sample answers may be used extensively and even modified at the marking centre OR they may be considered only briefly at the beginning of marking. In a few cases, the sample answers may not be used at all at marking.

The Board publishes this information to assist in understanding how the marking guidelines were implemented.

The 'sample answers' or similar advice contained in this document are not intended to be exemplary or even complete answers or responses. As they are part of the examination committee's 'working document', they may contain typographical errors, omissions, or only some of the possible correct answers.

Section I, Part B

Question 21 (a)

Sample answer:

There are two main strategies a person can utilise if they wish to reduce the likelihood of getting skin cancer:

- They can wear sunscreen to reduce risk of harmful UV rays.
- They can avoid any prolonged exposure they may have to the sun.

Question 21 (b)

Answers could include:

Heredity, sociocultural, socioeconomic and environmental determinants

Question 22

Sample answer:

Health facilities or services in Australia include:

- hospitals
- aged-care homes
- Meals on Wheels
- in-home nursing.

Examples should reflect different 'types' of health care facilities and/or services.

Question 23

Answers could include:

In this context, social justice refers to eliminating inequity in health, promoting the inclusiveness of diversity, and establishing supportive environments for all Australians. The four principles of social justice as they relate to health are:

- *equity* – fair allocation of resources and entitlement without discrimination
- *access* – the availability of health services, information and education
- *participation* – the empowerment of individuals and communities to be involved in planning and decision-making for good health
- *rights* – equitable opportunities for all individuals to achieve good health.

Social justice key terms – equity, diversity and supportive environments

Examples of health promotion initiatives could include Oxfam Australia's *Close the Gap*, which aims to:

- increase Aboriginal and Torres Strait Islanders' access to health services (access)
- address critical social issues, such as poor housing, nutrition, employment and education (access), among Indigenous Australians
- build Indigenous control and participation in the delivery of health and other services (participation)
- get governments at the state and national level to work in partnership with Indigenous Australian communities, health organisations and experts to develop and monitor a plan to tackle the Indigenous health crisis in Australia (participation).

Developing personal skills can only occur if education is assured for all individuals. Staying on at school until at least Year 10 will undoubtedly positively effect a person's ability to make informed health decisions. So for *equity* to be achieved, access to education is imperative. An example of this would be PDHPE lessons, in which information and issues around smoking are discussed.

Diversity is about ensuring that information is relevant to all people, irrespective of their age, gender, culture, geographic location, sexuality or socioeconomic status. This is where the 'one size fits all' approach to health promotion reaps little success. Programs must be able to be personalised in order to target all individuals. Consider a pamphlet that describes how to conduct breast self-examinations in order to detect the early signs of breast cancer. This pamphlet would develop the skills of a greater group of women if it was available in many different languages and included self-explanatory graphics that could be understood by all women, regardless of their level of education.

It is crucial for an individual to develop their personal skills if they are going to overcome any negative influence their environment may have on them. Developing personal skills supports the notion of *supportive environments* by empowering individuals through the teaching of knowledge and skills, which they can pass on to others in their environment. If a parent is educated about healthy food habits, they will provide nutritious foods for their children, which will reduce the chance of them developing a diet-related illness such as diabetes.

Creating supportive environments

Any health promotion initiative that addresses and acknowledges the influence of a person's environment will have an increased chance of success. If a local council improves the lighting and security of the local bicycle track, it will increase the chance of the track being used by people either in the early hours of the morning or later in the evening. This increased level of availability may encourage members of the community to use the track and therefore improve their physical fitness. This is how a *community* can assume some responsibility for promoting health.

Reorienting health services

In order for equity to be achieved, health services must be culturally sensitive and respect the diverse needs of all people, irrespective of their cultural backgrounds. Doctors should be aware of how their patients' backgrounds may influence their health choices, rather than just addressing the symptoms that patients are displaying.

All individuals, irrespective of educational background, should have equal opportunities to train in the promotion of health as well as the provision of health services, in order to increase the health outcomes of their own community and those of others. This would uphold the social justice principle of equity.

The benefit of research into health conditions is that it can improve health outcomes for all groups of people, particularly if it encourages change in negative lifestyle behaviours. This aspect of reorientating health services addresses diversity and equity, as all people in the future can reap the positives outcomes of important research, whether it is scientific or social.

Building healthy public policy

Through implementing legislation, policies and fiscal measures, governments can work towards creating equity among individuals and across different populations. Laws can ensure that all people are treated fairly, irrespective of their social markers. For example:

- All workplaces have government-enforced smoking bans that protect both blue-collar and white-collar workers.
- The Pharmaceutical Benefits Scheme (PBS) is an example of how the social justice principle of equity is addressed by the Commonwealth Government. The government recognises that not all people can afford the cost of prescription drugs, so it subsidises the cost of medication to assist people from low socioeconomic backgrounds in order to create equal access for everyone.
- The 'no hat, no play' policy in primary schools promotes a supportive environment for the good health of children. Since wearing a hat during breaks is compulsory, this protects children from exposure to UV and reduces the chance of them developing skin cancer.

[If students take a look through an initiative such as the National Tobacco Strategy and then link examples from that strategy to equity, diversity and supportive environments, that is also a reasonable method to take.]

Question 24 (a)

Sample answer:

Activity	Type of training
<i>Weightlifting</i>	Strength
<i>Yoga</i>	Flexibility
<i>Marathon</i>	Aerobic

Question 24 (b)

Sample answer:

There are three main strength-training techniques that athletes can use to improve performance. Firstly, resistance training can be used, which involves the use of elastic or hydraulic equipment to provide resistance during both concentric and eccentric contractions. Secondly, weight training can be used, which can involve the use of plates and dumbbells to provide resistance in concentric contractions. Thirdly, athletes can utilise isometric techniques whereby resistance is applied against an immovable force or weight is held in a static position. These techniques would be used with the progressive overload principle so that an athlete can improve their strength to the level needed in their sport, such as that required in a football scrum or for a vertical leap to catch the ball in AFL.

Question 25

Answers could include:

Applying the following dietary measures to TWO sports that have different nutritional needs:

Before exercise

- Hydration
- Temperature regulation
- Topping up glycogen stores for energy
- Preventing hunger during performance
- Person-specific, regular meal plans
- Pre-event meals

During exercise

- Sport-specific rehydration (water or sport drink)
- Refuelling (carbohydrate, for muscle and blood supplies)

After exercise

- Rehydration (water and electrolytes)
- Within 20–30 minutes: replenishing with high-GI carbohydrate within
- Within 1.5 hours: having a meal that combines protein and carbohydrate with a low GI.

Candidates may differentiate between endurance and power-based nutritional needs; for example time, food types, amount, food routine, and carbohydrate loading.

Question 26

Answers could include:

- Performance measures are used to identify improvement, and enable comparisons between standards or performers – both used depending on context requirement.
- Objective performance measures include time/speed, distance and height (eg athletics – stopwatches, tape measures) or number of successes, for example scoring in sport (independent of personal opinion), and used by coaches for:
 - reliability and validity
 - reliance on accuracy and consistency of measuring tools.
- Subjective performance measures are based on aesthetic quality of performance (feelings, impressions, opinions) in sports such as surfing, dancing, diving and ice-skating, and include measures such as average scores, use of checklists, rating scales, degree of difficulty, prescribed criteria, and use of experienced judges to provide objectives appraisal.

Section II

Question 27 (a) (i)

Sample answer:

Young people develop a lot of networks, like family, friends and teachers. If these networks are strong, a young person can seek comfort, support and help. Sharing a problem with a support network can help lighten the burden or improve health behaviours, for example how to quit smoking or reduce depression.

Answers could include:

- Developing connectedness with others:
 - helps improve support networks
 - is a skill or action to improve health.
- When a young person seeks comfort/knowledge/help, support networks:
 - listen/do not judge
 - help lighten the burden of personal problems
 - help make correct health choices
 - may help to put issues into perspective.

Question 27 (a) (ii)

Sample answer:

Young people who can adapt to challenges and bounce back from problems, such as losing friends, show good resilience. When we solve health problems, for example make low-risk choices such as limiting alcohol, these are examples of positive coping skills. Therefore, resilience and good coping skills allow young people to make healthy choices and handle difficult life moments, which improves their health, for example reducing the risk of accidents and depression by making informed health choices.

Answers could include:

- Resilience and coping skills:
 - help young people adapt to a hard life or overcome personal difficulty
 - develop character and the ability to bounce back from problems
 - enable youth to be more self-reliant and solve problems
 - allow young people to deal with challenges, take less risks, and develop positive decision-making.
- Young people can adapt to these skills.
- Young people should seek support or help.

Question 27 (b)***Sample answer:***

The areas of family and technology influence the lives of young people, and both have significantly changed between past and present generations. Family influence is very important today, as it was in the past. Before, many of our obligations and expectations were related to what our families wanted. This meant that young people always had to put themselves last. It also meant that girls looked after younger children and males always worked.

While this still occurs, today many young people make their own decisions and are still close to their families, but boys do look after young children and girls can work. Sometimes, certain cultures still impose cultural and family obligations on young people. This can make it difficult for them to make their own choices, and to fit in with the Australian culture and their friends.

Technology for young people today is significantly different from the way it was for past generations. The change has had a very good effect on the lives of young people and been a good influence. Young people can use this technology in their everyday lives as it is cheap and allows them to research things quickly over the internet, instead of going to the library as they did in the past. Technology also allows them to communicate quickly or get help if they need it. In the past, it was hard to get a telephone, which was often expensive to use and meant that it could take a long time to get help. This situation has changed with the access to mobile phones that young people have today. Some negative influences of technology include the pressure on young people now to have the latest technology, which can be expensive, and how they communicate online versus offline – for previous generations, these were not concerns since most communication and meetings occurred face to face, via telephone or through friends.

The changes in both family expectations and technology over time have had both positive and negative influences on young people.

Answers could include:

- Family sociocultural background means young people are expected to meet obligations to family before their own needs.
- Young people have to help siblings to find work.
- Young people may find it difficult to balance traditional family with Australian culture, independence and fitting in with their peers.
- Patterns of values/family make-up have changed, eg education, gender, drug use, careers.
- Technology has had a big effect on this generation, instant contact, social media.
- There are a large number of interactive devices.
- Technology has created complex issues of reality versus virtual reality, fact versus fiction on the internet.
- Technology has affected socialising, health and communication skills.

Question 28 (a) (i)***Sample answer:***

The media will often use language that overhypes the sporting contests that it covers. When high-profile events such as the Rugby League State of Origin occur, metaphors of aggression and war terms are often used, for example 'a battle', 'warriors' and 'bone-crunching tackles'.

The media message is very clear: you have to be tough and masculine to be successful. Certainly comparing a sporting contest to a war or a battle overstates the importance of the event.

These terms are rarely used by the media when describing women's sports. Generally speaking, when the media discusses women players, in sports such as tennis for example, there is more focus given to a player's grace and less to their athleticism. In contrast, top male-playing games are promoted as 'a clash', 'a torrid match' etc.

The media's message is to draw attention to an event through various forms of promotion, which include a great deal of emotive language and metaphors to generate interest with the viewers/readers.

Answers could include:

- The media's role in giving meanings to sport
- Deconstructing media a messages and images
- Common metaphors, eg football as 'war'

Question 28 (a) (ii)***Sample answer:***

The promotion of extreme sports by the media has largely occurred through the advent of 24-hour/7-days-a-week television cable sports channels. These television stations needed to find exciting entertainment to fill in the timeslots.

A wide variety of extreme sports are now telecast, including big wave surfing, endurance events, and rock and mountain climbing. The demographic most interested in these sports are young men, and by attracting them to stations such as Fuel TV, the advertising generated makes a great deal of money for the television station owners. These programs are quite cost-effective as they don't rely on high numbers of spectators to attend the contests to add to the appeal of the sport. They can be telecast well after the event, which also makes it cheaper – live telecasts are very expensive.

By and large, the emergence of extreme sport has been driven by the need to generate corporate advertising. The pressure to ensure that programs generate enough interest has meant that television producers are increasingly taking higher risks with their participants, for example jumping higher, more extremes of weather etc, which may result in injuries. The concern is that not enough is being done to regulate these events and prevent athletes from being exploited. The final edited package may not reflect exactly what has gone on and so mishaps may be downplayed. Young people emulating 'Jackass' style stunts has led to many broken bones etc.

While new sports are refreshing and have a market, there needs to be regulation so that these sports are sustained and athletes can safely participate.

Answers could include:

- The emergence of extreme sports as entertainment, eg big wave surfing
- Whether the media has pushed extreme sports to take excessive risks
- The difference in coverage for different sports across various print and electronic media
- Sponsorship
- Entertainment versus participation

Question 28 (b)**Sample answer:**

Modern sport has emerged as a commodity that is bought and sold for enormous amounts of money. This emergence has enabled many sports to have global audiences that were previously unavailable because the technology was unavailable or it was too expensive to broadcast.

Most weeks of the year in Australia, you can watch a major sporting event from somewhere in the world, often in the early hours of the morning. Events such as Champions League Football, golf tournaments, Wimbledon, and the US Tennis Open have adopted a business focus. By developing business contracts with television stations and corporate sponsors for advertising space, sporting organisations enjoy worldwide exposure and clubs attract more fans.

This generates enormous amounts of money and prestige and allows these sports to maintain state-of-the-art resources and professional full-time players.

For players, it allows them to concentrate on their sport and earn considerable amounts of money that can provide them and their families with very comfortable lives.

Sport as business has also led to high levels of sponsorship and advertising that generally perpetuates the successful running of a sporting organisation.

Some negative consequences, however, exist. Advertising of alcoholic beverages and, in some countries, cigarettes, does draw obvious criticism of sporting organisations by health officials. The issue of binge drinking and young people, and the coupling of a young person's favourite sport with an alcohol sponsor, is drawing growing criticism in Australia.

Some rule changes have occurred in sports to give advertisers greater exposure, for example after a goal is scored in AFL, a short advertisement is played before the restart of play.

Also, some sports have lamented the loss of certain traditions, for example when the Sheffield Shield Cricket was called the Pura Cup for a few years.

Finally, as wealthy tycoons start buying up famous sporting clubs, many fans may be dissatisfied with some of the changes they make, and this can, and has, alienated grass-roots supporters.

Answers could include:

- The development of professional sport
- Sport as big business
- Sponsorship, advertising and sport
- The economics of hosting major sporting events
- Consequences for spectators and participants

Question 29 (a) (i)**Sample answer:**

There are three common types of soft tissue injury:

- A tear is a disruption of the fibres of a muscle or tendon. The severity of a tear can range from a microscopic to full rupture of all the connecting soft tissue to a bone or muscle.
- A sprain is a tear of the ligament fibres, muscles or tendons that support a joint. Sprains usually occur when a joint is extended beyond its normal range of motion.
- A contusion or bruise is a bleeding into any soft tissue structure. It is usually caused by the direct impact of an object or person.

Question 29 (a) (ii)**Sample answer:**

The procedure for assessing the nature and extent of sport injuries is known as the TOTAPS method:

1. Firstly, an injured athlete is asked to describe what happened and to describe the nature of the injury (Talk).
2. This is followed by the sports medicine professional observing the injury and the overall response of the athlete (Observe).
3. Assuming there is no great risk of further injury or further pain, the sport medicine professional will gently touch the injury site looking for pain and feeling for deformity (Touch.)
4. If there is still no pain, the athlete will be asked to move the injured area through a normal range of motions under their own means (Active movement).
5. If there is still no pain present, the sports medicine professional can then move the injured athlete's injured body part through its expected range of motion (Passive movement).
6. Finally, a test of game-specific skills (Skill test) can be conducted.

If pain or abnormal function is observed at any time during the TOTAPS procedure, an athlete should not return to play. Only an athlete that successfully completes the skills test should be eligible to return to play before expert consultation.

Question 29 (b)**Sample answer:**

The human body produces a lot of heat during exercise, and loses this heat mainly through the evaporation of sweat from the skin. Evaporation is the process of converting liquid to gas. On hot and humid days, temperature control becomes more difficult – it is more difficult to cool the body by evaporation because the air is already saturated with water, which reduces the body's capacity for evaporation.

The heat produced in the body during exercise must be lost or serious problems can occur. When the body's core temperature moves outside of an acceptable range, the body's capacity to perform will be reduced. Athletes are commonly affected by heat or cold illness. If not managed promptly and appropriately, these illnesses can become serious.

In cooler climates, heat loss is not usually a problem; however, if it is very cold, the body may not produce enough heat to keep the core temperature within an acceptable range.

Airflow across the body results in heat loss by convection. Cold, windy conditions increase heat loss by convection. Athletes should be aware of the increased potential for heat loss by this method when exercising in these conditions. Clothing also influences heat transfer by convection.

Heat can radiate from a warm object to a cooler one. In a cold climate, an athlete will radiate heat to the environment surrounding them. During exercise on a warm day, an athlete will absorb heat from the surrounding environment.

Heat is also transferred when two objects of different temperatures contact each other; for example an athlete will lose heat to the environment on a cold morning. Conduction is particularly important when exercising in water. Water is an effective conductor of heat; therefore, body heat will be lost very quickly in cool water.

If athletes are training in hot conditions, or travelling to a hot climate, they should allow for a seven to 10-day acclimatisation period, which is needed for the body temperature regulation system to adapt to the hotter conditions. Fluid replacement is very important when exercising in hot conditions. Once acclimatised, a fitter person will sweat sooner and more, and lose less salt in sweating than a less fit person. The fluid lost must be regularly replaced to allow the cooling process to continue.

Wearing appropriate clothing is another important strategy athletes can use when exercising in hot and humid conditions. Athletes should try to wear a minimal amount of light-coloured and loose-fitting clothing, which also allows for adequate ventilation in order for sufficient evaporation to occur.

Additional strategies that an athlete may utilise in order to allow cooling to occur during competition and training are:

- exposing as much of the body surface as possible during breaks in play
- putting ice in the armpits, neck and groin during breaks in play
- using fans and shade during breaks in play.

Having longer breaks in play and shorter periods of play during extremes in temperature may assist. Introducing more drink carriers in particularly hot and humid conditions, or utilising ice jackets where available, can help.

Question 30 (a) (i)

Answers could include:

- Assessment of performance and fitness needs
- Schedule of events/competitions
- Climate and season

Question 30 (a) (ii)**Sample answer:**

Periodisation:

- prepares athlete for peaking and optimal performance via a comprehensive training program
- minimises risk of injury
- prevents over- and under-training
- allows for specific athlete short- and long-term goal-setting
- encompasses fitness and skill levels to meet the needs of the sport/performance
- allows for emphasis on specific training types to improve performance, eg volume and intensity
- has three phases that allow progressive and different development/adaptation, ie pre-season (preparatory), in season (competition) and post/off-season (transition).

Question 30 (b)**Answers could include:**

- Direct and immediate feedback to athletes (during training and competition) eg technique, biomechanical efficiency, tactics, fitness improvements
 - training innovations – lactate threshold testing, biomechanical analysis, improved techniques, strategy analysis
- Design-specific and advanced training to meet athlete needs
- Instantaneous analysis of performance
- Portable and affordable equipment
 - fast swimsuits, carbon-fibre pole vault, carbon-fibre bicycle frames, aerodynamic lightweight helmets, athletic track rubber compound, graphite golf shaft, touch pads, golf balls (low spin, greater distance and soft feel)
- Improved performance times, increased records set, decreased injury
- Accurate differentiation of time and rank
- Natural progression for safety within the sport, eg cycling helmets

Developments in technology have resulted in:

- expensive equipment and limited availability
- an uneven playing field, inequitable/unfair conditions
- disadvantages to athletes in remote areas
- a constant need to update equipment and training innovations
- psychological disadvantages
- ethical issues that lead to the re-evaluation of techniques/equipment – resetting regulations.

Question 31 (a) (i)***Sample answer:***

Health promotion aims to reduce a health issue or concern. To help improve this, we need to improve cultural relevance, for example female doctors for female patients and local decision-making on health priorities such as vaccinations. In this way, the health services provided will be appropriate, people will feel their cultural needs have been taken into account, and more people will respond to health promotion initiatives. If this is not done, people may not participate or listen to health promotions.

Answers could include:

- Health promotion strategies need to be inclusive, and not just address mainstream health issues.
- Include traditional health approaches where relevant.
- Feeling connected to health services/facilities encourages people to seek/use them.
- Cultural barriers need to be reduced to access health support.
- If more people used health services, this would lead to a reduction in health issues.

Question 31 (a) (ii)***Sample answer:***

Improving the health status of disadvantaged groups is a difficult process. However, actions that can be characterised as enabling, mediating and advocating can work together to provide sustainable improvements.

Enabling is the process whereby people gain more control over functions that influence their health. It empowers individuals to take control of their own health. Enabling should involve disadvantaged groups in the decision-making process to allow them to have a say in the actions that are taken to meet their needs; for example strategies such as providing access to information (using a variety of community languages) and supporting actions.

Mediating may be needed if there is conflict that results from different disadvantaged groups having their own interests or perspectives on health issues.

Advocating involves speaking up for groups to help assist change. It can be in the form of campaigns in the media, lobbying politicians or pressure groups.

Disadvantaged groups need to be involved in decision-making and the design of services, and to have a sense of ownership of health promotion programs. Programs that meet the needs of disadvantaged groups are more likely to succeed and be sustainable.

Answers could include:

- Effective health promotion to improve health status
- Sustainability, so that improvements in health continue
- Working with target groups, reinforce and continue skills, education, prevention
- Address the needs of disadvantaged groups
- Social determinates of health, eg economic, social, access to services and environmental
- Economic and social factors are a high priority
- Communication needs to match literacy levels
- Group ownership

Question 31 (b)**Sample answer:**

The media's role in influencing social attitudes and public policy for Aboriginal and Torres Strait Islander (ATSI) communities and people from culturally/linguistically diverse backgrounds (CALD) has been both positive and negative.

The media is a powerful tool. Early on, unfortunately, it was a negative influence on ATSI health. Statements such as 'Indigenous Australians are alcoholics' or 'Indigenous Australians cannot handle their drink' were common statements in the media. However, there are more Indigenous Australians who do not drink alcohol at all than non-Indigenous Australians; unfortunately, however, their social drinking was often highly visible in public places. This created a negative perception of Indigenous Australians that changed public policy, resulting in alcohol being either banned or limited in some communities. The perception provided a negative influence, as people were subsequently less inclined to work with and assist Indigenous Australians in improving their health. Another negative influence created by the media was the perception that Indigenous Australians were lazy and did not want to work. However, work for remote Australians was often in short supply and there were less services available to supply skills and training. This perception of Indigenous Australians, created by the media, affected ATSI health and is an example of a poor social attitude.

However, recently the media has improved its influence on issues that affect health services in ATSI communities. These services have become more localised, responding to community needs, and public policy has become more positive; for example, *Two Ways Together* and CEP are plans that the media has publicised to show the good work of ATSI people.

In the area of racism and prejudice, the media has played a more positive role both socially and in public policy for CALD groups. The media has been used to develop and show Australia as a tolerant multicultural society through the telling of stories and promoting social connectedness, such as Australia Day activities and refugee support groups, as well as local multicultural days, such as the Woolgoolga Curryfest that shows Sikh Indian culture in a positive light. This has influenced public policy, whereby state governments now follow the 'principles of multiculturalism' in state law; for example, support networks such as translation services have been incorporated into health services. This public policy promotes all cultures as part of Australia and is a positive influence on the nation's health.

The media plays a powerful role in fostering social attitudes and public policy development. As demonstrated, it has been both a negative and positive influence on ATSI peoples, and largely a positive one for CALD groups.

Answers could include:

- Health inequalities: ATSI, homelessness, sufferers of HIV/AIDS, incarceration, aged care, culturally and linguistically diverse groups, unemployed people, remote communities, people with disabilities
- The role of the media
- Social attitudes
- Public policy