

BOARD OF STUDIES
NEW SOUTH WALES

2003

**HIGHER SCHOOL CERTIFICATE
EXAMINATION**

Personal Development, Health and Physical Education

General Instructions

- Reading time – 5 minutes
- Working time – 3 hours
- Write using black or blue pen
- Write your Centre Number and Student Number at the top of pages 9 and 13

Total marks – 100

Section I Pages 2–15

60 marks

This section has two parts, Part A and Part B

Part A – 20 marks

- Attempt Questions 1–20
- Allow about 40 minutes for this part

Part B – 40 marks

- Attempt Questions 21–22
- Allow about 1 hour and 10 minutes for this part

Section II Pages 17–18

40 marks

- Attempt TWO questions from Questions 23–27
- Allow about 1 hour and 10 minutes for this section

Section I

Part A – 20 marks

Attempt Questions 1–20

Allow about 40 minutes for this part

Use the multiple-choice answer sheet.

Select the alternative A, B, C or D that best answers the question. Fill in the response oval completely.

Sample: $2 + 4 =$ (A) 2 (B) 6 (C) 8 (D) 9
A B C D

If you think you have made a mistake, put a cross through the incorrect answer and fill in the new answer.

A B C D

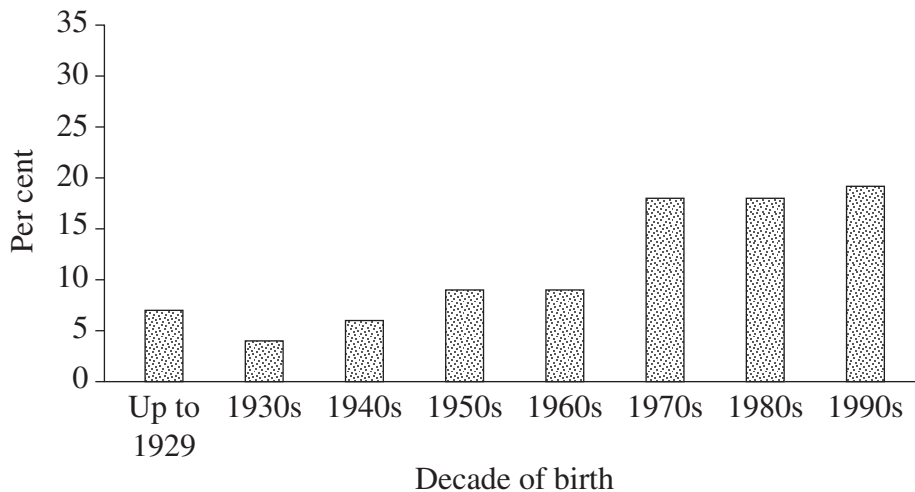
If you change your mind and have crossed out what you consider to be the correct answer, then indicate the correct answer by writing the word **correct** and drawing an arrow as follows.

A B C D
correct ↙

- 1** Which of the following is the leading cause of mortality for males in the 15–24 age group in Australia?
- (A) Drownings
 - (B) Motor-vehicle accidents
 - (C) Poisonings
 - (D) Suicides
- 2** How does regular vigorous exercise help prevent people developing Type 2 diabetes?
- (A) It increases blood cholesterol levels.
 - (B) It increases blood glycogen levels.
 - (C) It decreases blood glucose levels.
 - (D) It decreases blood oxygen levels.
- 3** What approach to health promotion does the new public health model advocate?
- (A) Bulk billing for all Australians to improve the health of individuals
 - (B) Cooperation of government and community in the promotion of better health
 - (C) Health promotion initiatives aimed at encouraging people to adopt healthy lifestyles
 - (D) Location of specialist health services in large population centres
- 4** Why is the prevalence of mental health problems in Australia often underestimated?
- (A) Mental health problems can be easily treated.
 - (B) People quickly recover from mental health problems.
 - (C) The majority of people with mental health problems do not seek treatment.
 - (D) The morbidity rate associated with mental health problems is low.

- 5** What are TWO reasons for the difference in the life expectancy of females and males in Australia today?
- (A) Fewer females practise unsafe behaviours and fewer females are obese.
 - (B) Fewer males practise unsafe behaviours and fewer males are obese.
 - (C) More females engage in less stressful occupations and more females participate in regular exercise.
 - (D) More males engage in less stressful occupations and more males participate in regular exercise.
- 6** What was the main outcome intended by the Federal Government when introducing the Lifetime Health Insurance Incentive and the 30% rebate on private health insurance?
- (A) To allow more people to choose their own doctor
 - (B) To decrease the financial burden on the public health system
 - (C) To redistribute health costs from the private sector to the public sector
 - (D) To reward those who have private health insurance
- 7** What provision to reduce health inequalities in Australia is an example of action for social justice?
- (A) Educating people about the impact of environmental factors on health status
 - (B) Ensuring an average level of health-care services that is appropriate for all Australians
 - (C) Examining socioeconomic factors to reduce the gap between income levels
 - (D) Increasing access to health-care services for all Australians, regardless of income
- 8** How does the 1997 Jakarta Declaration reflect the new public health model?
- (A) It promotes social responsibility in order to help improve the health status of all people.
 - (B) It redirects the responsibility for health promotion from governments to the private sector.
 - (C) It requires developing countries to seek greater funding for health care from developed countries.
 - (D) It promotes the reduction of community capacity, in order to empower the individual.

- 9 Which statement best describes why health promotion initiatives in Australia have been more effective in reducing the incidence of people infected with HIV than with hepatitis C?
- (A) Hepatitis C has been viewed by health authorities in Australia as a less serious risk to public health than HIV.
 - (B) In Australia more effective techniques for screening of blood have been available for HIV than for hepatitis C.
 - (C) People infected with HIV have lobbied more effectively than people infected with hepatitis C.
 - (D) People at risk of becoming infected with hepatitis C have been more likely to practise unsafe behaviour than people at risk of becoming infected with HIV.
- 10 The graph shows the trend in the prevalence of a major cause of illness and death in children aged 5 to 14 in Australia.



What major cause of illness and death is represented?

- (A) Asthma
- (B) Type 2 diabetes
- (C) Cancer
- (D) Obesity

- 11** Which of the following food nutrients yields the most energy per gram?
- (A) Carbohydrates
 - (B) Fats
 - (C) Minerals
 - (D) Proteins
- 12** For which purpose would an athlete use relaxation techniques?
- (A) To control arousal level
 - (B) To control lactate level
 - (C) To increase anxiety level
 - (D) To increase heart rate
- 13** During which process is muscle glycogen converted to pyruvic acid?
- (A) Alactacid glycolysis
 - (B) Anabolic glycolysis
 - (C) ATP/PC glycolysis
 - (D) Aerobic glycolysis
- 14** What type of feedback is provided by audience applause during a performance?
- (A) Concurrent feedback
 - (B) Internal reinforcement
 - (C) Intrinsic feedback
 - (D) Knowledge of results
- 15** Why does a skilled performer have more time than an unskilled performer to spend on game strategies?
- (A) The skilled performer displays decreased kinaesthetic sense.
 - (B) The skilled performer recognises relevant cues.
 - (C) The unskilled performer lacks trait anxiety.
 - (D) The unskilled performer responds better to concurrent feedback.

- 16 A sedentary 42-year-old, who has passed a pre-screening test, has participated in an eight-week aerobic fitness program.

Based on the FITT principle, which aerobic program would BEST suit this person to continue to improve aerobic fitness for weeks nine to twelve?

	<i>Type</i>	<i>Intensity</i>	<i>Frequency</i>	<i>Time</i>
(A)	Jogging	Low	3 times a week	15 minutes
(B)	Power walking	Medium	2 times a week	45 minutes
(C)	Circuit training	Medium	4 times a week	30 minutes
(D)	Treadmill	High	1 time a week	60 minutes

- 17 A marathon runner, two hours into the event, experiences nausea, an increase in core body temperature and a decrease in blood pressure.

What could be a reason for the marathon runner experiencing these symptoms?

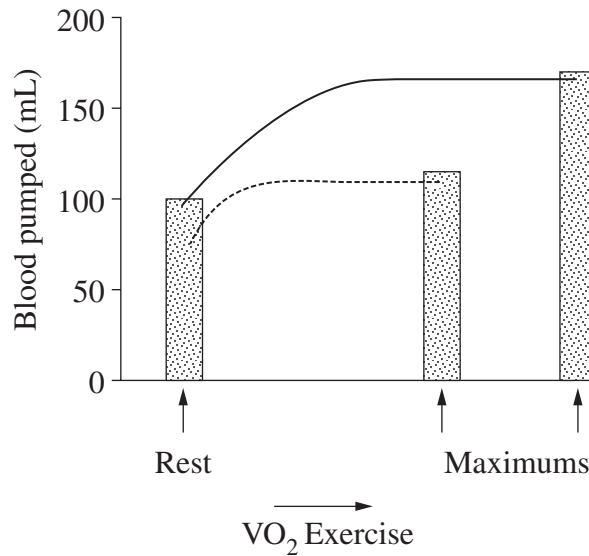
- (A) Consumption of carbohydrates by the runner before the event was inadequate.
 (B) Insufficient water was consumed by the runner before and during the event.
 (C) The runner experienced a heightened level of pre-event state anxiety.
 (D) The runner's training program did not include an appropriate muscular endurance component.
- 18 The diagram represents a continuum from closed to open skills.



Which group of skills could represent the points X, Y and Z?

- (A) Gymnastics floor routine, high jump, defend an attacking move in hockey
 (B) Long jump, dive from a 3-metre springboard, free throw in basketball
 (C) Rebound in netball, return of serve in tennis, ride a wave on a surfboard
 (D) Softball pitch, target shooting in archery, goal shooting in soccer

- 19 This graph shows physiological responses of trained and untrained athletes at rest and during maximum VO_2 exercise.



What does the dotted line on the graph represent?

- (A) The cardiac output of a trained athlete
 - (B) The cardiac output of an untrained athlete
 - (C) The stroke volume of a trained athlete
 - (D) The stroke volume of an untrained athlete
- 20 Why can a physical activity of high-intensity and short duration be repeated after a brief recovery interval?
- (A) Other energy pathways are available for the immediate supply of phosphorus and creatine.
 - (B) Skeletal muscles have sufficient stores of ATP, so less phosphorus and creatine need to be resynthesised.
 - (C) Oxygen is readily available for the recombination of phosphorus and creatine.
 - (D) The recombination of phosphorus and creatine is a rapid chemical process.

Personal Development, Health and Physical Education

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Centre Number

Section I — Part B (continued)

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Student Number

In your answers you will be assessed on how well you:

- demonstrate an understanding of health and physical activity concepts
 - apply the skills of critical thinking and analysis
 - illustrate your answer with relevant examples
 - present ideas in a clear and logical way
-

Marks

Question 22 — Factors Affecting Performance (20 marks)

- (a) Outline the features of the alactacid (ATP/PC) and the lactic acid energy systems. **5**

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Question 22 continues on page 14

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Personal Development, Health and Physical Education

Section II

40 marks

Attempt TWO questions from Questions 23–27

Allow about 1 hour and 10 minutes for this section

Answer each question in a SEPARATE writing booklet. Extra writing booklets are available.

In your answers you will be assessed on how well you:

- demonstrate an understanding of health and physical activity concepts
 - apply the skills of critical thinking and analysis
 - illustrate your answer with relevant examples
 - present ideas in a clear and logical way
-

	Marks
Question 23 — The Health of Young People (20 marks)	
(a) In this option, you have studied TWO areas of concern that affect the health of young people. Explain how these areas of concern affect the groups of young people most at risk of poor health outcomes.	8
(b) Analyse why developing both a sense of connectedness and creating a sense of future can enable young people to attain better health.	12
 Question 24 — Sport and Physical Activity in Australian Society (20 marks)	
(a) Explain how the beginnings of modern sport in nineteenth century England have influenced the nature of sport in Australia today.	8
(b) Analyse why the relationship between sport and the mass media has influenced people's understanding, values and beliefs about sport.	12

Please turn over

In your answers you will be assessed on how well you:

- demonstrate an understanding of health and physical activity concepts
 - apply the skills of critical thinking and analysis
 - illustrate your answer with relevant examples
 - present ideas in a clear and logical way
-

Marks

Question 25 — Sports Medicine (20 marks)

- (a) Explain how progressive mobilisation and the use of heat and cold can assist an injured athlete return to play. **8**
- (b) Analyse why sports medicine has a focus on the specific demands of adult athletes, aged athletes and female athletes. **12**

Question 26 — Improving Performance (20 marks)

- (a) Explain how the results of a test of aerobic capacity you have studied could be used by a coach to plan for endurance training. **8**
- (b) Strength training methods may be varied to suit the demands of the phases of competition. Analyse why a sprint athlete should use different methods of strength training during these phases. **12**

Question 27 — Equity and Health (20 marks)

- (a) Explain how poor living conditions and the traditional understanding about health have contributed to the health inequities experienced by Aboriginal and Torres Strait Islander peoples. **8**
- (b) Analyse why effective health promotion strategies assist in improving the health of people living in rural and remote communities in Australia. **12**

End of paper