

BOARD OF STUDIES
NEW SOUTH WALES
HIGHER SCHOOL CERTIFICATE EXAMINATION

1999

**PERSONAL
DEVELOPMENT,
HEALTH, AND PHYSICAL
EDUCATION**

2 UNIT

*Time allowed—Three hours
(Plus 5 minutes reading time)*

DIRECTIONS TO CANDIDATES

Section I (20 marks)

- Attempt ALL questions.
- Complete your answers in either blue or black pen on the Answer Sheet provided.
- Each question is worth 1 mark.

Section II (60 marks)

- Attempt ALL questions.
- Answer the questions in the spaces provided in this paper. You may ask for extra Writing Booklets if you need them.
- Each question is worth 15 marks.
- Write your Student Number and Centre Number in the spaces provided on the first page of each question.

Section III (20 marks)

- Attempt ONE question.
- Answer the question in a SEPARATE Writing Booklet.
- You may ask for extra Writing Booklets if you need them.

SECTION I

(20 Marks)

Attempt ALL questions.

Each question is worth 1 mark.

Instructions for answering multiple-choice questions

- Complete your answers in either blue or black pen.
- 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

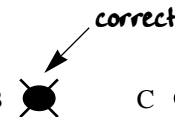
A ☐ B ☒ C ☐ D ☐

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 ☐



- 1** Health promotion initiatives are most successful when they

 - (A) are coordinated by the government sector.
 - (B) are developed by experts for a target population.
 - (C) involve community consultation.
 - (D) target the whole population.

- 2** Life expectancy at birth is

 - (A) a common indicator of health status.
 - (B) increasing for males and decreasing for females.
 - (C) measured by morbidity rates.
 - (D) the total number of years an individual will live.

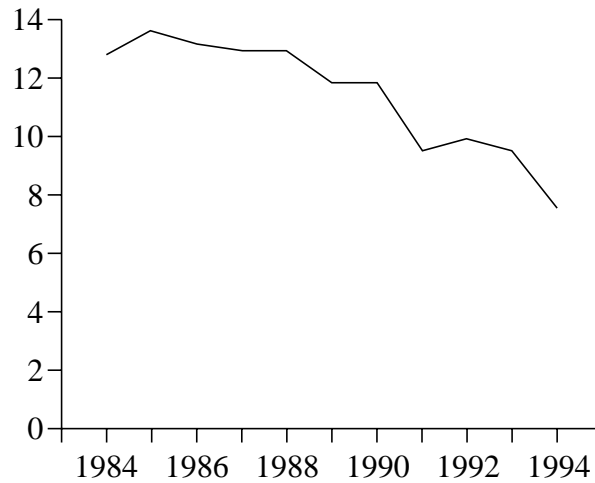
- 3** The groups of people most likely to be at risk of developing a communicable disease in Australia are

 - (A) adults over 65, schoolchildren and pregnant women.
 - (B) children 0–5, drug users and pregnant women.
 - (C) drug users, hospital patients and schoolchildren.
 - (D) hospital patients, adults over 65 and children 0–5.

- 4** An individual has a blood cholesterol level of 6.2 mmol/L. This is most likely due to

 - (A) a diet high in saturated fats.
 - (B) a diet high in unsaturated fats.
 - (C) a high intake of dietary fibre.
 - (D) a high level of physical activity.

- 5 The following graph represents accidental deaths per 100 000 children.

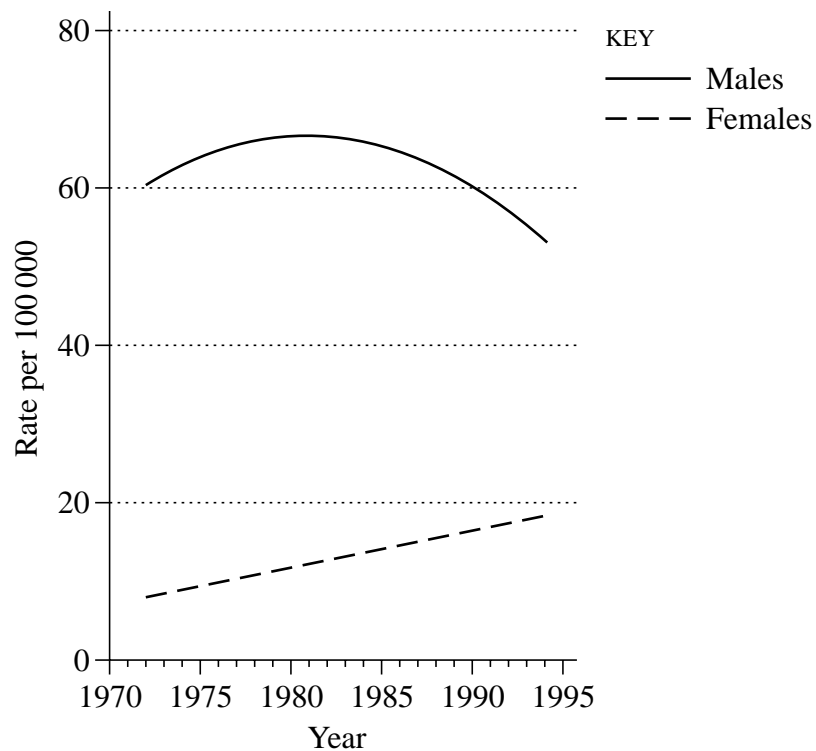


*Australian Bureau of Statistics,
Australian Social Trends, ABS,
Canberra, 1996 p 59.*

The trend in the graph could best be explained by

- (A) a decline in the birth rate in Australia.
 - (B) greater access to emergency services.
 - (C) modifications to the environment.
 - (D) promoting safety at early childhood centres.
- 6 After lung cancer, the leading causes of cancer deaths in Australia are
- (A) cervical, stomach and bone cancers.
 - (B) colon, breast and prostate cancers.
 - (C) leukaemia, bowel and bladder cancers.
 - (D) skin, testicular and throat cancers.
- 7 Given current Australian trends in morbidity, which one of the following trends is likely to continue into the twenty-first century?
- (A) A decrease in skin cancer
 - (B) An increase in cardiovascular disease
 - (C) An increase in HIV infection
 - (D) An increase in mental illness

- 8 The decline in road fatalities over the last twenty-five years has been due mainly to
- (A) health promotion targeting young drivers.
 - (B) improvements to roads and highways.
 - (C) legislation to change driver behaviour.
 - (D) modifications to vehicle design.
- 9 The following graph represents a disease mortality rate for New South Wales.



NSW Cancer Incidence and Mortality, Cancer Control Information Centre, NSW Cancer Council, Sydney, 1994, p 47.

Which disease is represented by this mortality rate?

- (A) Asthma
- (B) Cardiovascular disease
- (C) Diabetes type I
- (D) Lung cancer

- 10** Which of the following statements regarding the provision of health care in Australia is true?
- (A) Communities have equal access to health care facilities.
 - (B) Less money is spent on institutional than non-institutional health care.
 - (C) The majority of health funding is spent on preventing illness and injury.
 - (D) The Medicare levy provides the majority of funds for health care expenditure.
- 11** An endurance athlete competing for a maximum of two hours wants to modify her diet to improve performance. This could be best achieved by
- (A) increasing both complex carbohydrates and fats.
 - (B) increasing both fats and proteins.
 - (C) increasing complex carbohydrates and decreasing fats.
 - (D) increasing proteins and decreasing fats.
- 12** A runner who tried to sprint the last lap of a 1500-metre race slowed down before the finish line and was overtaken. This was probably because the runner
- (A) exceeded the anaerobic threshold too early.
 - (B) failed to reach the aerobic threshold.
 - (C) failed to reach the anaerobic threshold.
 - (D) produced low levels of lactic acid.
- 13** A training squad completes the same battery of tests. When compared with the results of others in the same group, the results of one athlete were within the 70–80 percentile range. This is an example of
- (A) criterion referenced assessment.
 - (B) norm referenced assessment.
 - (C) rating scale assessment.
 - (D) subjective assessment.
- 14** An athlete takes salt tablets during an event. The most likely effect is
- (A) increased blood circulation.
 - (B) increased risk of dehydration.
 - (C) maintenance of blood pressure.
 - (D) maintenance of fluid levels.

- 15** A tee-baller learning to hit the ball off the tee has her results recorded in the table.

<i>Session</i>	<i>Attempts</i>	<i>Successful hits</i>
1	10	2
2	10	3
3	10	2
4	10	5
5	10	9
6	10	10

The learning curve that best represents these results is

- (A) linear.
 - (B) negatively accelerating.
 - (C) positively accelerating.
 - (D) S-shaped.
- 16** Which type of practice would best suit a skilled and highly motivated performer learning a simple task?
- (A) Distributed practice with emphasis on accuracy.
 - (B) Distributed practice with emphasis on normal performance speed.
 - (C) Massed practice with emphasis on accuracy.
 - (D) Massed practice with emphasis on normal performance speed.
- 17** A hiker exposed to extreme cold conserves body heat through
- (A) hyperthermia.
 - (B) hypothermia.
 - (C) vasoconstriction.
 - (D) vasodilation.

Please turn over

- 18** A feature of the lactic acid system is that it
- (A) eliminates lactic acid from a muscle after about 15 minutes following exercise.
 - (B) is the main energy system for 12–15 seconds of maximum effort.
 - (C) releases ATP slowly and continuously for muscle contraction.
 - (D) results in exhaustion after about 30 minutes at 60% of maximum effort.
- 19** A fitness test is considered reliable when it
- (A) can be conducted by more than one person.
 - (B) creates similar results under similar conditions.
 - (C) produces improved results over time for the same person.
 - (D) tests what it is meant to test each time it is conducted.
- 20** The following table shows a resistance training program.

<i>Weights</i>	<i>Sessions</i>	<i>Sets</i>	<i>Repetitions</i>	<i>Exercise speed</i>	<i>Time between sets</i>
Medium to heavy	4–6 per week	6–10	6–15	Slow to medium	Short

An athlete using this program is most likely training for

- (A) lean body mass.
- (B) muscular endurance.
- (C) power.
- (D) strength.

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MARKER'S USE ONLY

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STUDENT NUMBER

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1999

**HIGHER SCHOOL CERTIFICATE EXAMINATION
PERSONAL DEVELOPMENT, HEALTH, AND
PHYSICAL EDUCATION
2 UNIT—SECTION II**

CENTRE NUMBER

QUESTION 24 Movement Skill and Performance

Marks

- (a) Outline how an elite athlete uses psychology to improve performance in competition. 5

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QUESTION 24 (Continued)

Marks

(b) Explain how body temperature is regulated during physical activity.

5

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- (c) Compare personal and prescribed criteria as methods of judging the quality of performance.

5

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PERSONAL DEVELOPMENT, HEALTH, AND
PHYSICAL EDUCATION
2 UNIT**

SECTION III**Marks**

(20 Marks)

Attempt ONE question.

Answer the question in a SEPARATE Writing Booklet.

Each question is worth 20 marks.

QUESTION 25 Community Health Issues

- | | | |
|-----|---|----------|
| (a) | Describe and justify the fieldwork techniques you would use to determine the health status of a school community. | 8 |
| (b) | (i) Briefly describe a special population that is representative of the local area you have studied. Discuss the responsibilities for managing the health problems of this group. | 6 |
| | (ii) Recommend facilities and services needed to improve the health of this group. Discuss reasons for your recommendations. | 6 |

QUESTION 26 Sociology of Games and Sport

- | | | |
|-----|--|-----------|
| (a) | Describe historical influences on the development of Australia's sporting identity. | 5 |
| (b) | In recent times the value of sport in Australian society has been challenged by sections of the community. Discuss reasons for this trend, with reference to: <ul style="list-style-type: none"> • politics in sport • competition in sport. | 10 |
| (c) | Discuss how community attitudes have influenced the participation of women in physical activity. | 5 |

QUESTION 27 Two Social Health Issues—Drug Use and HIV/AIDS**Marks**

- (a) Discuss the impact of drug use problems on the community. **10**
- (b) Outline the types of support structures required by people affected by HIV/AIDS. **5**
- (c) Describe the individual implications for a person living with HIV. **5**

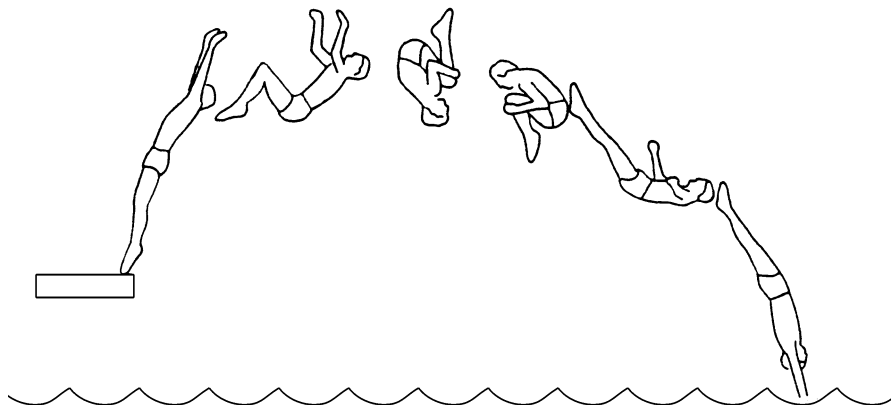
QUESTION 28 Human Movement Analysis

Attempt EITHER Part A OR Part B.

EITHER

Part A Biomechanics of Human Movement

- (a) Describe how centre of gravity affects the relationship between stability and mobility. Give TWO examples to support your answer. **5**
- (b) Explain the role of occupational biomechanics in reducing injury. **6**
- (c) The figure below illustrates a diver leaving the board and performing a tucked, backward one-and-a-half somersault. **9**



*Hay, James G, The
Biomechanics of Sports
Techniques, 2nd edn,
Prentice Hall, Englewood
Cliffs, NJ, 1978.*

Describe the biomechanical principles that apply to the successful performance of this dive.

OR

QUESTION 28 (Continued)**Marks****Part B Applied Anatomy, Exercise Physiology, Principles of Training,
Fitness-testing Protocols**

- | | | |
|-----|--|----------|
| (a) | Describe the relationship between the prime movers, synergists and stabilisers when kicking a ball positioned on the ground. | 6 |
| (b) | Describe how implements are used as levers. | 7 |
| (c) | Describe the protocol for the PWC 170 bicycle ergometer test. Predict the differences in the PWC 170 test results for a trained and an untrained individual. | 7 |

QUESTION 29 The Art and Science of Coaching

- | | | |
|-----|--|----------|
| (a) | Outline how a coach can ensure the safety of players during training. | 6 |
| (b) | You are the coach of a local under-15 years sporting team that plays for enjoyment and social reasons. | |
| | (i) Describe the roles you would adopt to be an effective coach of this team. | 6 |
| | (ii) Discuss how your planning and organisation of training will be influenced by the team's reasons for participating. Provide examples to support your discussion. | 8 |

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