Student Number.....

Killara HIGH SCHOOL

Koola Avenue
Killara NSW 2071

Phone 02 9498 3722
Fax 02 9498 2202

killara-h.school@det.nsw.edu.au
www.khs.nsw.edu.au

2023 TRIAL HSC 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 Student Number at the top of all pages (including the multiple choice page)
- Answer the questions in the space provided, which gives guidance for the expected length of response
- Extra writing space is provided at the back of this booklet. Clearly label your work

Total Marks: 100

Section I – 60 marks (pages 2–18)
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 21–28
- Allow about 1 hour and 10 minutes for this part

Section II – 40 marks (page 19-20)
- Answer TWO questions from Questions 29–33
- Allow about 1 hour and 10 minutes for this section

Student Number.....

Section I
60 marks

Part A – 20 marks
Attempt Questions 1–20
Allow about 40 minutes for this part

Use the multiple-choice answer sheet for Questions 1–20 found on Page 21.

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1 An elite athlete's conditioning segment of the training program focuses on interval training. In which of the following sports does the athlete most likely compete?

A. Half marathon running

B. 1500 m swim

C. Rugby

D. Diving

2 Read the information in the table below.

- High blood pressure
- High cholesterol
- Overweight
- Family history

These risk factors are most closely associated with which disease?

A. Asthma

B. Type-1 Diabetes

C. Lung cancer

D. Cardiovascular disease

Student Number.....

3 What is the focus of the associative stage of skill acquisition?

A. Determining what subskills comprise the movement

B. Adapting the movement to pressure situations

C. Viewing demonstrations of the movement

D. Practising the movement

4 How will people benefit most from emerging treatments and technologies in health care?

A. A reduction in the cost of Medicare

B. Increased availability of online prescriptions to reduce doctors' appointments

C. Improved early detection and screening procedures

D. Improved waiting times for surgery in public hospitals

5 Which of the following is NOT an example of a physiological response to aerobic training?

A. Increased lung capacity

B. Increased levels of haemoglobin

C. Enhanced slow twitch muscle fibres

D. Increased resting heart rate

6 Identify an advantage of private health insurance.

A. Shorter waiting times on some surgeries, compared to public Medicare

B. Bulk billing by a doctor or surgeon of your choice

C. Services performed in public hospitals are covered free of charge

D. Out of pocket expenses provided for services performed outside hospital

Student Number.....

7 How can hot water immersion be beneficial as a post exercise recovery strategy?

A. It slows down the tissue inflammatory process, preventing the build-up of waste

B. It causes vasodilation of blood vessels in the body's extremities, enhancing the removal of waste

C. It causes vasoconstriction of blood vessels in the body's extremities, enhancing the removal of waste

D. It causes vasodilation of blood vessels in the body's extremities, decreasing the removal of waste

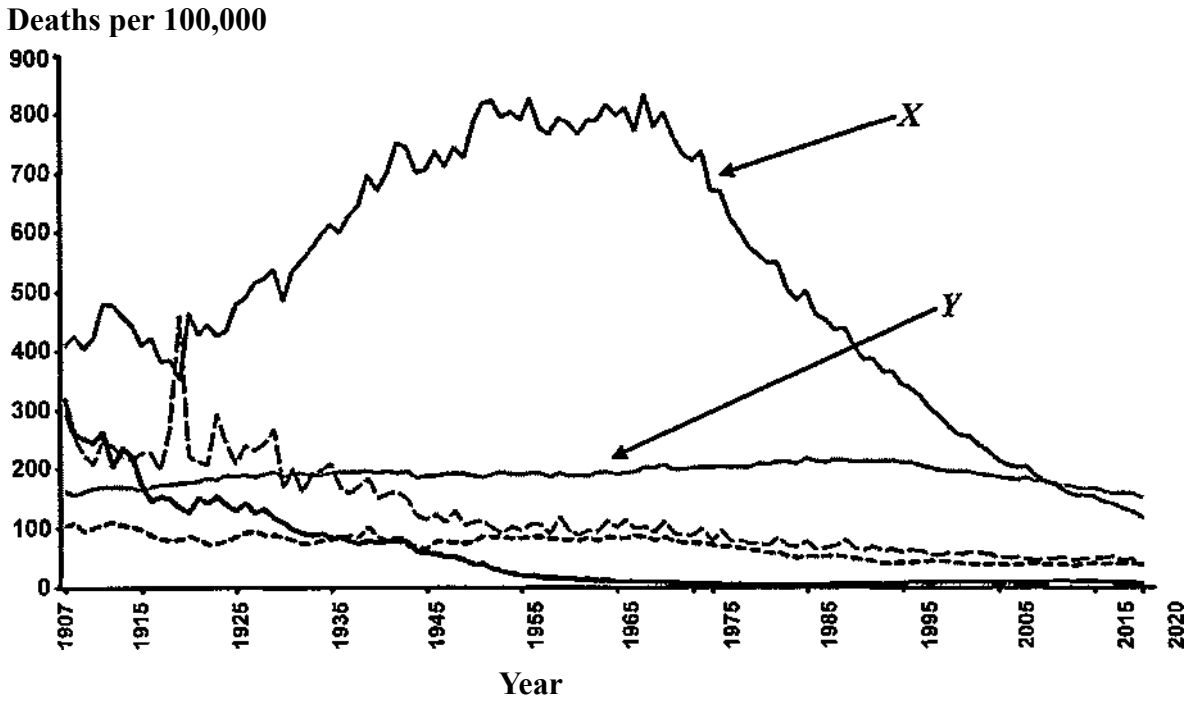
8 Which of the following identifies the nature of open skills and closed skills?

A.	An open skill occurs in a predictable and frequently changing environment	A closed skill occurs in a stable and unpredictable environment
B.	An open skill occurs in an unpredictable and frequently changing environment	A closed skill occurs in a stable and predictable environment
C.	An open skill is determined by factors internal to the performer	A closed skill requires the performer to determine the speed and timing of execution
D.	An open skill is determined by factors external to the performer	A closed skill requires the performer to react to the speed and timing of execution

Student Number.....

9 Observe the figure below.

Age-standardised mortality rates (per 100,000 population), by broad cause of death, 1907-2020

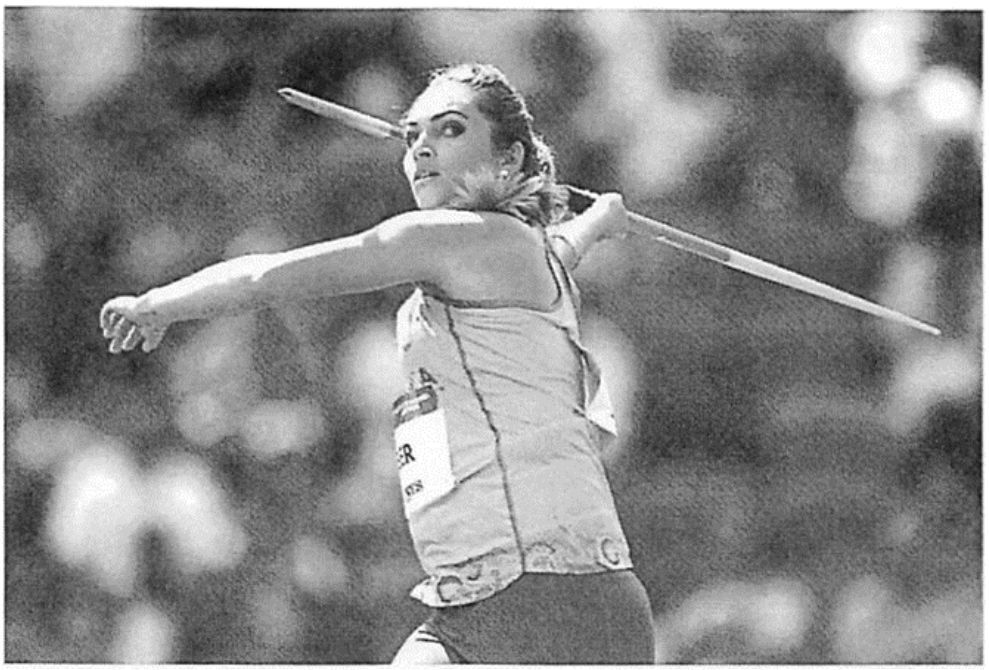


Which row in the table best represents mortality trends X and Y in the figure above?

	X	*Y*
A.	Cardiovascular disease	Cancers
B.	Cardiovascular disease	Diabetes
C.	Cancers	Cardiovascular disease
D.	Cancers	Injury and poisoning

Student Number.....

10 Observe the following image.



What type of measurement is used to determine the winner of this event?

A. Objective and personal

B. Subjective and prescribed

C. Objective and prescribed

D. Subjective and personal

11 The recent budget increased health expenditure for Medicare bulk billing services by $3.5 billion.

How does this support the social justice principle of equity?

A. By limiting access for individuals with low socioeconomic status

B. By increasing out-of-pocket expenses for all patients

C. By improving healthcare access for all individuals

D. By decreasing access to bulk billing for at risk individuals

12 A rugby player pictures the ball travelling over the black dot prior to attempting a conversion kick. This is an example of:

A. Mental rehearsal

B. Visualisation

C. Relaxation

D. Goal setting

13 Which of the following is true about socioeconomic determinants of heart disease?

A. Lower levels of education cause poor decision-making in taking prescribed medications

B. Low socioeconomic status causes high blood pressure and high cholesterol

C. Low socioeconomic status prevents access to heart surgery following a heart attack

D. Low socioeconomic status decreases purchasing options and access to lifestyle supports

14 Which process correctly identifies how caffeine supplementation is used to improve performance?

A. The conversion of muscle into amino acids which can be used as the final source of energy in an endurance event

B. The conversion of fat stores into free fatty acids which can be used as an energy source in an endurance event

C. The conversion of creatine phosphate into ATP which can be used as an energy source in a short duration and explosive event

D. The conversion of carbohydrate into glycogen which can be used as the first energy source in a short duration and explosive event

Student Number.....

15 The First Lap voucher program provides a $100 voucher for parents of children aged 3-6 years towards the cost of swimming lessons.

Which principle of social justice and which action area of the Ottawa Charter is being supported by this government health promotion initiative?

A. Equity and creating a supportive environment

B. Diversity and developing personal skills

C. Supporting environments and reorienting health services

D. Building public health policy and strengthening community action

16 A discus thrower feels the disc release incorrectly out of their hand. Which type of feedback is being utilised?

A. Intrinsic and delayed

B. Extrinsic and delayed

C. Intrinsic and concurrent

D. Extrinsic and concurrent

17 Observe the statement below.

> *Cardiovascular disease is the third leading cause of disease burden in Australia, accounting for 13% of the total.*
> *The leading risk factors include high blood pressure, high cholesterol, tobacco use and obesity, all of which are modifiable.*

This statement supports which criteria for the inclusion of cardiovascular disease as a priority health issue?

A. Social justice principles and prevalence of condition

B. Prevalence of condition and priority population groups

C. Potential for prevention and priority population groups

D. Prevalence of condition and potential for prevention

Student Number.....

18 In the table below, identify the sports best-matched to the corresponding energy systems.

	ATP/PC system	**Lactic acid system**	**Aerobic system**
A.	Long jump	400m swim	Triathlon
B.	100m run	Long jump	Marathon
C.	100m run	Weightlifting	Triathlon
D.	100m run	400m run	Marathon

19 Observe the data for incidence of the top 5 most diagnosed cancers in 2021.

Cancer site/type	*Cases*	*Age standardised rate*
Breast cancer	20 030	67.8
Prostate cancer	18 110	55.9
Melanoma of the skin	16 878	55.3
Colorectal cancer	15 540	49.7
Lung cancer	13 810	42.6

What has been the most significant factor in contributing to the relatively high recorded case numbers of these cancers?

A. Improved education in schools on risk factors and prevention

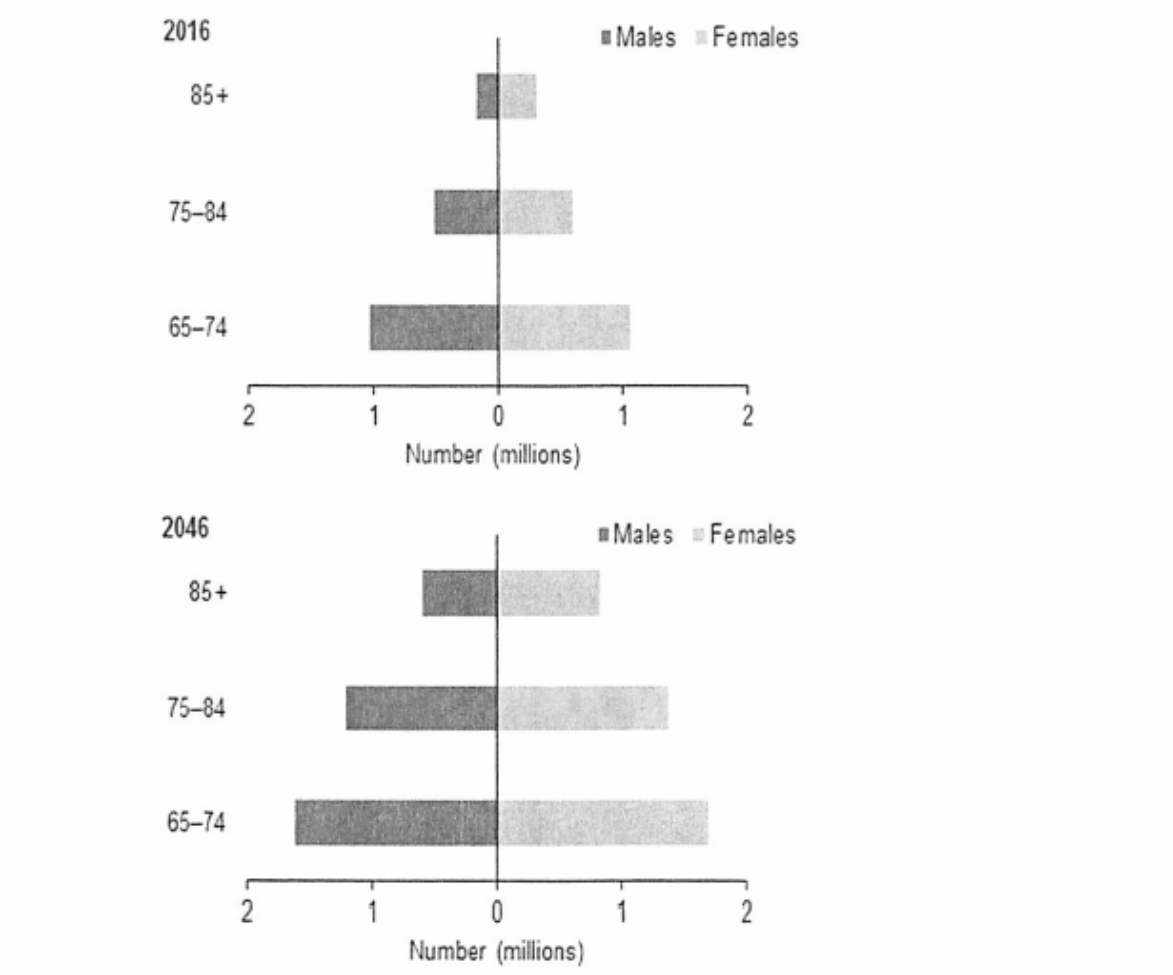
B. More people smoking and less people using sun protection

C. Improvements in screening technology

D. Improvements in cancer treatment

Student Number.....

20 Observe the following graph on the projected Australian population ages 65 years and over.



What is the most likely impact of these projections?

A. Current aged care services will be adequate and can cope with an ageing population

B. More volunteers and carers will become available as the number of retired people increases

C. Private health insurance will become mandatory

D. Prevalence of chronic disease will increase along with demand for health services

Student Number.....

Section I - Part B

40 marks
Attempt Questions 21-28
Allow about 1 hour and 10 minutes for this part

Answer the questions in the spaces provided.

Question 21 (3 marks)

Compare Commonwealth Government and State Government responsibilities for health care facilities and services.

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Question 22 (3 marks)

Outline the characteristics of a skilled performer. Provide an example.

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Question 23 (4 marks)

Explain the role of epidemiology and how this information is useful.

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Question 24 (4 marks)

Explain optimum arousal and the effect it has on sporting performance.

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Student Number.....

Question 25 (5 marks)

Analyse how communities and governments can reduce the impact of socioeconomic determinants faced by Aboriginal and Torres Strait Islander peoples.

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Student Number.....

Question 26 (5 marks)

Compare the dietary requirements of a marathon runner and a weightlifter, considering pre-, during and post-performance needs.

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Student Number.....

Question 27 (8 marks)

Evaluate how effectively one health promotion initiative applies the action areas of the Ottawa Charter.

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Question 28 (8 marks)

Analyse the relationship between the principles of training, physiological adaptations, and improved performance.

In your answer refer to TWO principles of training.

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Student Number.....

Question 31 – Sports Medicine (20 marks)

(a) (i) Outline TWO strategies that an athlete could use to support the body's temperature regulation mechanisms. **3**

(ii) Explain how sports policies and the sports environment promote safe participation. Refer to specific examples in your response. **5**

(b) Assess the degree to which the specific needs of female athletes have to be considered for them to participate safely in sport? **12**

Question 32 – Improving Performance (20 marks)

(a) (i) Outline safe and potentially harmful training procedures for ONE type of training. **3**

(ii) Compare how training adaptations can be measured and monitored across TWO different training types. **5**

(b) Critically analyse the training methods from TWO training types and how they best suit specific performance requirements. Use examples from a range of sports in your answer. **12**

Question 33 — Equity and Health (20 marks)

(a) (i) Outline how improving access to facilities and services can address the causal factors that contribute to inequity. **3**

(ii) Compare the environmental determinants encountered by TWO population groups experiencing health inequities. **5**

(b) To what extent does the exposure to multiple risk factors create health inequities? **12**

End of paper