

HIGHER SCHOOL CERTIFICATE EXAMINATION

1995 GENERAL SCIENCE 2 UNIT

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

DIRECTIONS TO CANDIDATES

Section I—Core

- Attempt ALL questions.
- **Part A** 15 multiple-choice questions, each worth 1 mark. Mark your answers in pencil on the Answer Sheet provided.
- **Part B** 10 questions, each worth 3 marks. Answer this Part in the Part B Answer Book.
- Part C 6 questions, each worth 5 marks. Answer this Part in the Part C Answer Book.
- Write your Student Number and Centre Number on each Answer Book.
- You may keep this Question Book. Anything written in the Question Book will NOT be marked.

Section II—Electives

- Attempt ONE question.
- Each question is worth 25 marks.
- Answer the question in a *separate* Elective Answer Book.
- Write your Student Number and Centre Number on the cover of each Elective Answer Book.
- Write the Course, Elective Name, and Question Number on the cover of each Elective Answer Book.
- You may ask for extra Elective Answer Books if you need them.

SECTION I—CORE

(75 Marks)

Attempt ALL questions.

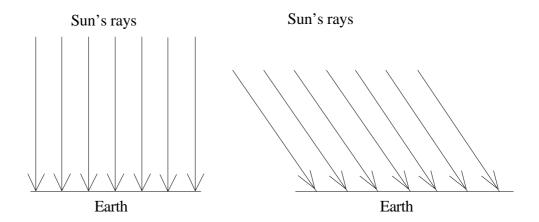
PART A

Questions 1–15 are worth 1 mark each.

Mark your answers in pencil on the Answer Sheet provided.

Select the alternative A, B, C, or D that best answers the question.

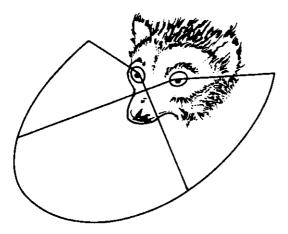
1. Look at these diagrams.

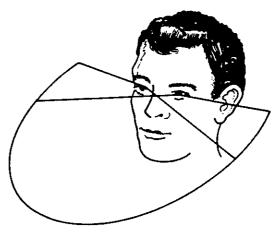


These diagrams are most likely to be used in an explanation of

- (A) tidal movements on the Earth.
- (B) day and night.
- (C) the Earth's seasons.
- (D) solar eclipses.
- **2.** Which of the following are *least* likely to be used by astronomers to find out about the solar system?
 - (A) sound waves
 - (B) light waves
 - (C) radio waves
 - (D) X-rays

- 3. Suppose Id and Ego are two planets in a newly discovered solar system. They are the same size and have the same atmospheric pressure. Id has a greater mass than Ego. If a rocket takes off from each planet in turn, which one of the following statements is true?
 - (A) The launch from Ego requires more fuel.
 - (B) Equal atmospheric pressures mean that the fuel required for each launch is the same.
 - (C) The greater mass of Id causes more fuel to be used.
 - (D) Atmospheric pressure provides the largest force opposing the launch.
- 4. The feature more likely to be found in prosimian primates than in anthropoid primates is
 - (A) the absence of a tail.
 - (B) a well-developed sense of smell.
 - (C) an upright stance.
 - (D) an opposable thumb.
- **5.** As seen in the diagram below, the human has a larger area of overlapping vision than the lemur.





'Human perspectives Book2', Newton and Joyce, Fig. 27.6, McGraw Hill, 1992.

LEMUR HUMAN

This enables the human to

- (A) see further to each side.
- (B) see further into the distance.
- (C) judge distance more accurately.
- (D) detect small objects more clearly.

		4
6.		ch of the following characteristics is <i>least</i> useful in distinguishing the skull of an ape that of a human?
	(A)	The presence of a forehead.
	(B)	Forward-facing eyes.
	(C)	The presence of a chin.
	(D)	The size of the brain.
7.	dom	plants can have round or wrinkled seeds. The characteristic for round seeds (R) is inant over the characteristic for wrinkled seeds (r). Pure RR plants are crossed with rr plants. Out of every 100 offspring plants, the number expected to have round s is
	(A)	100
	(B)	75
	(C)	50
	(D)	25
8.	Plun	nbers use copper water-pipes because copper
	(A)	has an attractive appearance.
	(B)	is a poor conductor of heat.
	(C)	has a high chemical reactivity.
	(D)	does not corrode easily.

Sand, sodium carbonate, and lime would probably be used in the manufacture of

Some of our most useful materials are polymers. All polymers

contain very long, parallel fibres.

contain strong synthetic molecules.

can be softened by heating and reshaped.

are made of repeating units linked together.

9.

10.

(A)

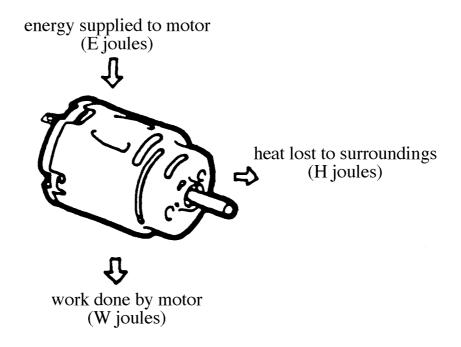
(B)

(C)

(D)

(A) rubber.(B) glass.(C) plastic.(D) iron.

- 11. Alexander Fleming discovered the antibiotic property of penicillin when he found that
 - (A) Penicillium mould growing on oranges stopped them from decomposing.
 - (B) Penicillium mould growing on a bacterial culture caused the bacteria to die.
 - (C) eating the *Penicillium* mould growing on bread cured his sore throat.
 - (D) cleaning his instruments with *Penicillium* extract stopped the spread of infection.
- **12.** The theory of evolution by natural selection was proposed by two scientists at the same time. These scientists were
 - (A) Erasmus Darwin and Charles Darwin.
 - (B) Charles Darwin and Carl Linnaeus.
 - (C) Jean Lamarck and Alfred Russel Wallace.
 - (D) Charles Darwin and Alfred Russel Wallace.
- **13.** An electric motor has the following energy inputs and outputs.



Design and Technology', C Carbon, 1989, p.110. Thomos Nelson UK

Which of the following equations is true for this motor?

- (A) E = W H
- (B) $E = H \times W$
- (C) $E = H \div W$
- (D) E = W + H

14. A research scientist reported a startling new discovery in the field of genetic engineering. This discovery did not agree with the existing scientific theory and caused controversy.

It would be best to

- (A) ignore the reported discovery.
- (B) reject the existing scientific theory.
- (C) have other scientists repeat the experiments.
- (D) survey the community about the discovery.
- **15.** Scientists often perform many different experiments to test a new hypothesis. If *all* observations fit the hypothesis, scientists are most likely to say that
 - (A) the evidence supports the hypothesis.
 - (B) the hypothesis has been proved.
 - (C) no other hypotheses are possible.
 - (D) further experiments are unnecessary.

PART B

Questions 16–25 are worth 3 marks each. Answer this Part in the Part B Answer Book.

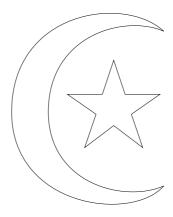
16. There are many objects present in the night sky. A distant object was photographed through a powerful telescope. The picture below was obtained.

'World of science Bk 2', Heffernan and Learmonth, Longman Australia, 1981, p.41. Photo: Peter Mellander

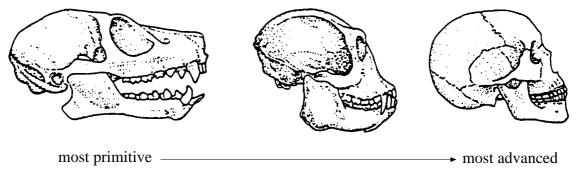


- (a) Which kind of celestial body is most likely to have this shape?
- (b) During your observations of the night sky, you studied the movement of the planets. Describe how you knew where to look for a particular planet.
- (c) How can you be sure it is a planet and not a star that you are looking at?

17. The diagram below shows the Moon and a star. It does not agree with our observations of the night sky.



- (a) Give ONE reason why the diagram does not agree with our observations.
- (b) Why are optical telescopes often placed on high mountains in remote areas on Earth?
- (c) Name ONE instrument that can be used to discover stars hidden behind clouds of dust in space.
- **18.** Three primate skulls are shown below. The diagrams are not to scale.



'Biology data and resource book', Hawes et al, Longman Australia, 1983.

- (a) Describe TWO evolutionary trends illustrated by the skulls.
- (b) What is the evolutionary significance of EACH trend?
- 19. You have investigated the inheritance of a single human characteristic.
 - (a) Name the characteristic you investigated.
 - (b) What data did you need to collect for your investigation?
 - (c) What did you find out about the inheritance of this characteristic?

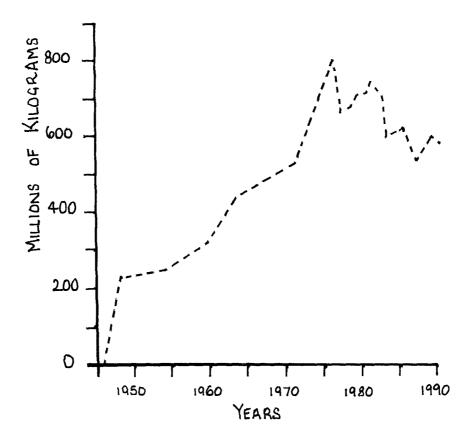
20. The table below shows the energy required to extract various metals from their compounds. The compounds are all metal oxides.

Metal	Energy (kJ) required to extract 1 kg of metal
P	7 370
Q	31 100
R	2 470
S	24 700
T	144

'Biology of Chemistry vol. 1', RB Bucat, Australian Academy of Science 1983, p 185.

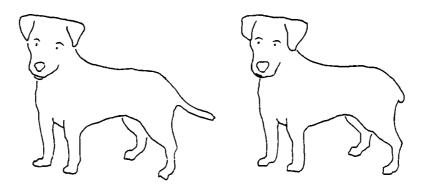
- (a) (i) Which metal in the table is the most active?
 - (ii) Explain your answer to part (i).
- (b) Describe the method of extraction of a common metal from its ore.
- 21. Holiday houses usually have synthetic blankets rather than woollen blankets.
 - (a) Describe TWO properties of synthetic blankets that make them more suitable than woollen blankets for this use.
 - (b) Name ONE property of rubber that makes it suitable for use in surgical gloves.
 - (c) You have made a plastic. Describe how you made it.

22. The graph shows the amount of pesticide produced in the United States of America between 1945 and 1990.



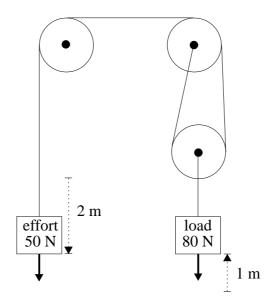
- (a) (i) Suggest ONE reason why the amount of pesticide produced increased between 1945 and the 1970s.
 - (ii) Suggest ONE reason why the amount of pesticide produced decreased between the 1970s and 1990.
- (b) Describe ONE property that a modern pesticide should have that the early pesticide DDT did not have.

23. Dogs can have their tails shortened by a simple operation.



Dogs with shortened tails have been bred together for many generations.

- (a) (i) What would Lamarck's theory predict would eventually happen to the tails of new-born pups?
 - (ii) Give ONE reason for the prediction.
- (b) If the dog-breeding was done as a scientific experiment, describe a *control* for the experiment.
- (c) Give ONE argument that was used in the nineteenth century against Darwin's theory of evolution.
- **24.** David carried out an experiment to calculate the efficiency of the pulley system below.



He found that an effort of 50 N was needed before the load of 80 N began to move. When the effort moved down by 2 m, the load rose by 1 m.

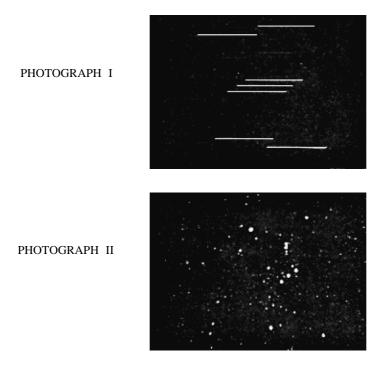
- (a) Use the results to calculate the efficiency of the system. Show all working.
- (b) Describe ONE way of improving the efficiency of this pulley system.

- 25. In 1930, the managers of a large chemical company gave permission for its scientists to study chemical reactions conducted under very high pressure. The proposed research had no obvious use. In 1933, a waxy, solid polymer called polythene was made by the scientists in one of the reactions. Polythene is now one of the cheapest and most widely used plastics.
 - (a) Do you think that the managers or the scientists were responsible for the social consequences of this discovery? Give ONE reason.
 - (b) (i) Outline ONE example of recent scientific research that you have read about, or seen reported on TV.
 - (ii) Explain how the results of this research may be of benefit to people.

PART C

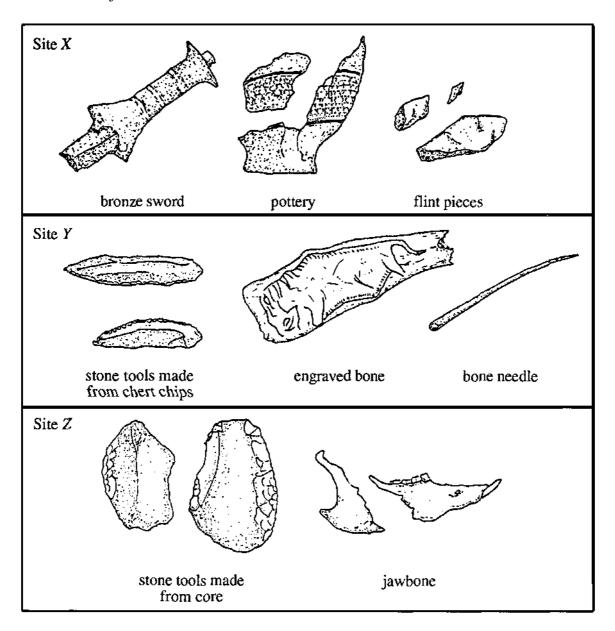
Questions 26–31 are worth 5 marks each. Answer this Part in the Part C Answer Book.

- **26.** Remote-controlled space probes, but not people, have visited other planets in our solar system.
 - (a) (i) Describe TWO problems that have prevented people from travelling to other planets.
 - (ii) Describe ONE way of overcoming ONE of these problems.
 - (b) What is ONE disadvantage of sending a remote-controlled space probe to explore the solar system, rather than sending people?
 - (c) Name a recent space venture you have studied and state ONE purpose of the venture.
- **27.** Two different methods were used to take a photograph of the night sky. Each photograph was taken over a four-minute period.



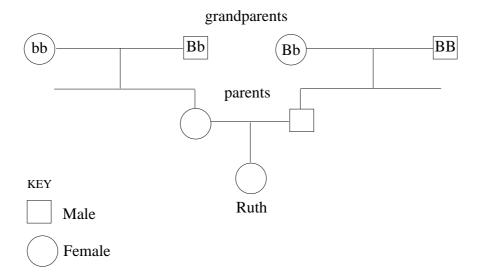
- (a) What caused the apparent motion of the objects in Photograph I?
- (b) How did the method used to take Photograph II differ from the method used to take Photograph I?
- (c) Galileo used a telescope to view the night sky. List TWO observations made by Galileo that led him to believe that the Sun was at the centre of our solar system.
- (d) How did Newton explain the fact that the planets are kept in their orbits round the Sun?

28. A cave in southern France contained evidence of occupation by three distinct groups of humans at different times. Examine the diagram representing the objects found at each site. The objects are not drawn to scale.



- (a) Describe ONE piece of evidence that shows site Z was used by humans and not other animals.
- (b) Which site was most likely used by Neanderthals? Explain your answer.
- (c) What do the following objects indicate about the culture of the people who used them?
 - (i) Engraved bone at site Y.
 - (ii) Flint pieces at site X.

29. The characteristic for brown eyes (B) is dominant over that for blue eyes (b). Part of Ruth's family tree is shown in the diagram.



- (a) What is the scientific term used for the symbols B and b?
- (b) What are the possible genotypes for Ruth's mother?
- (c) (i) Both of Ruth's parents have brown eyes. Can Ruth have brown eyes? Explain your answer.
 - (ii) Ruth's brown-eyed parents are expecting a new baby soon. If Ruth has blue eyes, what is the probability that the baby will have blue eyes too? Show your working.
- **30.** A newspaper had this heading on an article.

Antibiotic-resistant germ blamed for deaths

Deadly 'Superbug' spreads through wards

'Chemistry: the salter's approach', G Hill et al, 1989, p 198, Heinemann Educational.

- (a) Explain what is meant by the term 'germ'.
- (b) What type of germs may be treated with antibiotics?
- (c) Using the Darwinian theory of evolution, explain how germs can become resistant to antibiotics.
- (d) How can the problem of antibiotic resistance be minimized?

31. 'Scientific discoveries often bring unforeseen social problems.'

Imagine that you are in a debate and must argue that this statement is *true*.

- (a) Support the statement by describing TWO examples of scientific discoveries and explain the social problems caused by them.
- (b) You are planning to conduct an opinion poll about whether people think scientific discoveries cause social problems. Describe TWO ways that you can improve the reliability of your opinion poll.

SECTION II—ELECTIVES

(25 Marks)

Attempt ONE question.

Answer the question in a *separate* Elective Answer Book.

QUESTION 32. Colour

(a) In your study of colour, you carried out some laboratory work.

Choose ONE topic and write it as a heading.

Either

• The physics of colour, including continuous and line spectra.

Or

• Colour and living things, e.g. camouflage, chlorophyll.

Describe ONE important experiment you did during your investigation of this topic.

- (i) what you were trying to find out;
- (ii) what you did;
- (iii) what your observations were;
- (iv) a labelled diagram to illustrate either part (ii) or part (iii);
- (v) what you were able to conclude from your observations;
- (vi) an explanation of how this experiment increased your understanding of this topic.
- (b) Explain briefly the meaning of any THREE of the following terms:
 - wavelength
 - refraction
 - absorption
 - primary colour.
- (c) List items of information that you learnt from your study of behavioural reactions to colour, e.g. mating colours, hot and cold colours. In your answer you may include diagrams and tables.
- (d) Write an essay on the perception of colour, including trichromatism.

QUESTION 33. Metals in the Service of People

(a) In your study of metals in the service of people, you carried out some laboratory work.

Choose ONE topic and write it as a heading.

Either

Modern methods of extraction and reasons for the use of the different processes.

Or

Properties of metals compared with the properties of alternative materials.

Describe ONE important experiment you did during your investigation of this topic.

- (i) what you were trying to find out;
- (ii) what you did;
- (iii) what your observations were;
- (iv) a labelled diagram to illustrate either part (ii) or part (iii);
- (v) what you were able to conclude from your observations;
- (vi) an explanation of how this experiment increased your understanding of this topic.
- (b) Explain briefly the meaning of any THREE of the following terms:
 - ore
 - smelting
 - · electrolysis
 - lustre.
- (c) List items of information that you learnt from your study of the discovery and use of metals by early civilizations. In your answer you may include diagrams and tables.
- (d) Write an essay on the uses of metals related to their particular properties and methods of overcoming any difficulties associated with their use.

QUESTION 34. Optics

(a) In your study of optics, you carried out some laboratory work.

Choose ONE topic and write it as a heading.

Either

• The wave properties of light—reflection, refraction, diffraction, interference, and polarization.

Or

Image formation by mirrors and lenses.

Describe ONE important experiment you did during your investigation of this topic.

- (i) what you were trying to find out;
- (ii) what you did;
- (iii) what your observations were;
- (iv) a labelled diagram to illustrate either part (ii) or part (iii);
- (v) what you were able to conclude from your observations;
- (vi) an explanation of how this experiment increased your understanding of this topic.
- (b) Explain briefly the meaning of any THREE of the following terms:
 - frequency
 - focus
 - · wavelength
 - angle of incidence.
- (c) List items of information that you learnt from your study of multi-component optical systems, including microscopes, telescopes, and binoculars. In your answer you may include diagrams and tables.
- (d) Write an essay on modern developments in optics, e.g. holograms, optical fibres.

QUESTION 35. Petroleum and its Compounds

(a) In your study of petroleum and its compounds, you carried out some laboratory work.

Choose ONE topic and write it as a heading.

Either

The extraction of fuels from petroleum.

Or

• The properties and uses of the distillation products of petroleum.

Describe ONE important experiment you did during your investigation of this topic.

- (i) what you were trying to find out;
- (ii) what you did;
- (iii) what your observations were;
- (iv) a labelled diagram to illustrate either part (ii) or part (iii);
- (v) what you were able to conclude from your observations;
- (vi) an explanation of how this experiment increased your understanding of this topic.
- (b) Explain briefly the meaning of any THREE of the following terms:
 - hydrocarbon
 - catalytic cracking
 - plastic
 - impervious.
- (c) List items of information that you learnt from your study of the production of other chemicals from petroleum and their use in making new substances. In your answer you may include diagrams and tables.
- (d) Write an essay on the formation of petroleum in the Earth's crust, its location, and extraction.

QUESTION 36. Physiology of the Senses

(a) In your study of physiology of the senses, you carried out some laboratory work.

Choose ONE topic and write it as a heading.

Either

• Structure and function of the main sense organs.

Or

• Internal receptors, including those of blood pressure, carbon dioxide concentration, and muscle tension.

Describe ONE important experiment you did during your investigation of this topic.

- (i) what you were trying to find out;
- (ii) what you did;
- (iii) what your observations were;
- (iv) a labelled diagram to illustrate either part (ii) or part (iii);
- (v) what you were able to conclude from your observations;
- (vi) an explanation of how this experiment increased your understanding of this topic.
- (b) Explain briefly the meaning of any THREE of the following terms:
 - neurone
 - synapse
 - central nervous system
 - · reflex arc.
- (c) List items of information that you learnt from your study of the transmission of impulses, and their reception in particular regions of the brain. In your answer you may include diagrams and tables.
- (d) Write an essay on malfunctions of the sense organs.

QUESTION 37. Reproduction in Animals and Plants

(a) In your study of reproduction in animals and plants, you carried out some laboratory work.

Choose ONE topic and write it as a heading.

Either

Sexual and asexual reproduction.

Or

• A detailed study of reproduction in at least ONE animal and ONE plant.

Describe ONE important experiment you did during your investigation of this topic.

- (i) what you were trying to find out;
- (ii) what you did;
- (iii) what your observations were;
- (iv) a labelled diagram to illustrate either part (ii) or part (iii);
- (v) what you were able to conclude from your observations;
- (vi) an explanation of how this experiment increased your understanding of this topic.
- (b) Explain briefly the meaning of any THREE of the following terms:
 - fertilization
 - pollination
 - spore
 - · embryo.
- (c) List items of information that you learnt from your study of reproduction in the main animal and plant groups. In your answer you may include diagrams and tables.
- (d) Write an essay on evolutionary trends in methods of reproduction.

QUESTION 38. The Insects

(a) In your study of the insects, you carried out some laboratory work.

Choose ONE topic and write it as a heading.

Either

• The distinguishing characteristics and classification of insects.

Or

• A detailed study of TWO insects, one that has complete metamorphosis and one that has incomplete metamorphosis.

Describe ONE important experiment you did during your investigation of this topic.

- (i) what you were trying to find out;
- (ii) what you did;
- (iii) what your observations were;
- (iv) a labelled diagram to illustrate either part (ii) or part (iii);
- (v) what you were able to conclude from your observations;
- (vi) an explanation of how this experiment increased your understanding of this topic.
- (b) Explain briefly the meaning of any THREE of the following terms:
 - thorax
 - arthropod
 - classification
 - adaptation.
- (c) List items of information that you learnt from your study of behaviour and communication of insects that live in communities. In your answer you may include diagrams and tables.
- (d) Write an essay on the biological success of insects and its implications for people.

QUESTION 39. The Science of Food Technology

(a) In your study of the science of food technology, you carried out some laboratory work.

Choose ONE topic and write it as a heading.

Either

Methods of food preservation and their scientific bases.

Or

Physical and chemical effects of cooking on food.

Describe ONE important experiment you did during your investigation of this topic.

- (i) what you were trying to find out;
- (ii) what you did;
- (iii) what your observations were;
- (iv) a labelled diagram to illustrate either part (ii) or part (iii);
- (v) what you were able to conclude from your observations;
- (vi) an explanation of how this experiment increased your understanding of this topic.
- (b) Explain briefly the meaning of any THREE of the following terms:
 - pickling
 - pasteurization
 - sterilization
 - · dehydration.
- (c) List items of information that you learnt from your study of the factors causing deterioration, decay, and food spoilage. In your answer you may include diagrams and tables.
- (d) Write an essay on scientific principles applied to food packaging.

QUESTION 40. The Scientific Basis of Photography

(a) In your study of the scientific basis of photography, you carried out some laboratory work.

Choose ONE topic and write it as a heading.

Either

• The function and method of operation of various parts of a camera, such as lens, shutter speed, and diaphragm aperture.

Or

Techniques of developing and printing.

Describe ONE important experiment you did during your investigation of this topic.

- (i) what you were trying to find out;
- (ii) what you did;
- (iii) what your observations were;
- (iv) a labelled diagram to illustrate either part (ii) or part (iii);
- (v) what you were able to conclude from your observations;
- (vi) an explanation of how this experiment increased your understanding of this topic.
- (b) Explain briefly the meaning of any THREE of the following terms:
 - fixer
 - negative
 - film
 - f-stop.
- (c) List items of information that you learnt from your study of the structure and working of a simple camera. In your answer you may include diagrams and tables.
- (d) Write an essay on the chemical basis of the photographic process.

QUESTION 41. Water

(a) In your study of water, you carried out some laboratory work.

Choose ONE topic and write it as a heading.

Either

The physical and chemical properties of water.

Or

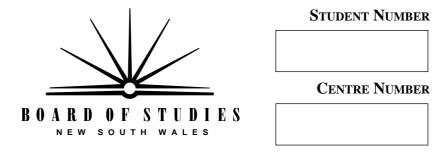
• The effects of water on the Earth's crust.

Describe ONE important experiment you did during your investigation of this topic.

- (i) what you were trying to find out;
- (ii) what you did;
- (iii) what your observations were;
- (iv) a labelled diagram to illustrate either part (ii) or part (iii);
- (v) what you were able to conclude from your observations;
- (vi) an explanation of how this experiment increased your understanding of this topic.
- (b) Explain briefly the meaning of any THREE of the following terms:
 - transpiration
 - solvent
 - erosion
 - diffusion.
- (c) List items of information that you learnt from your study of the problems associated with the shortage of water. In your answer you may include diagrams and tables.
- (d) Write an essay on the importance of water in living systems.

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HIGHER SCHOOL CERTIFICATE EXAMINATION

1995 GENERAL SCIENCE 2 UNIT PART B ANSWER BOOK

DIRECTIONS TO CANDIDATES

- Write your Student Number and Centre Number at the top right-hand corner of the page.
- You should receive this Answer Book with a Part A Answer Sheet, a Part C Answer Book, and an Elective Answer Book.
- Answer Questions 16 to 25 in this Answer Book.
- Each question is worth 3 marks.

EXAMINER'S USE ONLY

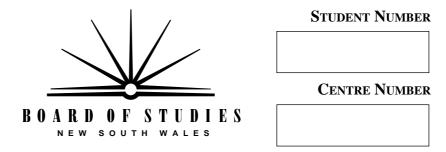
PART	Mark	Examiner	Check
В			

EXAMINER'S USE ONLY **SECTION I** PART B Each question is worth 3 marks. Answer the questions in the spaces provided. 16. (a) (b) (c) **17.** (a) Reason (b) (c) Instrument 18. (a) Trend 1 Trend 2 Significance of trend 1 (b) Significance of trend 2 **19.** Characteristic (a) (b)

(c)

20.	(a)	(i) Most active metal	EXAMINER'S USE ONLY			
		(ii) Explanation				
	(b)	Name of metal				
		Method of extraction				
21.	(a)	Blanket property 1				
		Blanket property 2				
	(b)	Rubber property				
	(c)	Method				
22.	(a)	(i) Reason for increase				
		(ii) Reason for decrease				
	(b)	Property				

23.	(a)	(i) Prediction	EXAMINER'S USE ONLY
		(ii) Reason	
	(b)	Control	
	(c)	Argument	
24.	(a)	Calculation of efficiency	
	(b)		
25.	(a)	Who was responsible? Reason	
	(b)	(i) Example	
		(ii) Benefit	



HIGHER SCHOOL CERTIFICATE EXAMINATION

1995 GENERAL SCIENCE 2 UNIT PART C ANSWER BOOK

DIRECTIONS TO CANDIDATES

- Write your Student Number and Centre Number at the top right-hand corner of the page.
- You should receive this Answer Book with a Part A Answer Sheet, a Part B Answer Book, and an Elective Answer Book.
- Answer Questions 26 to 31 in this Answer Book.
- Each question is worth 5 marks.

EXAMINER'S USE ONLY

PART	Mark	Examiner	Check
С			

SECTION I

EXAMINER'S USE ONLY

PART C

Each question is worth 5 marks.

Answer the questions in the spaces provided.

26.	(a)	(i) Problem 1	
		Problem 2	
		(ii)	
	(b)	Disadvantage	
	(c)	Name	
		Purpose	
27.	(a)	Cause	
	(b)	Difference	
	(c)	Observation 1	
		Observation 2	
	(d)	Explanation	

				EXAMINER'S USE ONLY
28.	(a)	Eviden	nce	
	(b)	Site		
		Explar	nation	
		•••••		
	(c)	(i)	Bone at site <i>Y</i>	
		(ii)	Flint at site <i>X</i>	
20	()	G :		
29.	(a)	Scienti	ific term	
	(b)	Mothe	er's genotypes	
	(c)	(i)	Can Ruth have brown eyes?	
			Yes / No	
			Explanation	
		(ii)		

			EXAMINER'S USE ONLY
30.	(a)		
	(b)	Type of germs	
	(c)		
	(d)		
31.	(a)	Discovery 1	
		Problem	
		Discovery 2	
		Problem	
	(b)	Way 1	
		Way 2	