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**SECTION A**

**Answer ALL the questions in Section A. Write your answers in the spaces provided.**

**You are advised to spend no more than 20 minutes on this section.**

**For Question 1(a) and (b), choose an answer, A, B, C or D, and put a cross in the box (☒). If you change your mind, put a line through the box (☒) and then put a cross in another box (☒).**

1. In 1514, Copernicus proposed that the Earth travelled round the Sun. This was contrary to teaching at the time, which said that the Sun travelled round the Earth.

(a) How might this proposition have affected the lives of ordinary people at the time?

- A It made navigation easier
- B It put teachers out of work
- C It reduced the influence of the Church
- D It had no effect

(1)

(b) Why might those in authority at the time have rejected this proposition?

- A It was thought to be a joke
- B It was against their religious teachings
- C They didn't understand it
- D They thought Copernicus was uneducated

(1)

Q1

(Total 2 marks)



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2. In many districts, glass containers are collected for recycling. The glass is melted down and made into new containers. It has been suggested that the containers should simply be reused rather than melting them down.

What information do you need to decide whether this is a practical and cost-effective suggestion?

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Q2

(Total 3 marks)



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3. (a) A father, aged 55, has had kidney failure and requires treatment by lengthy dialysis each week. One of his children, aged 23, has been identified as a potential kidney donor because there is a good tissue match, and he is willing to donate one kidney to his father.

Explain **two** ethical issues that might arise from this situation.

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(4)

- (b) How could the ethical issues differ if the young man had kidney failure and the father was willing to donate?

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(2)

Q3

(Total 6 marks)



<p>4. A large store selling electrical goods stated in its advertisements “Some of our deals are finite in supply”.</p> <p>Comment on the use of the word ‘finite’ in this statement.</p> <p>.....</p> <p>.....</p> <p>.....</p> <p>.....</p> <p>.....</p> <p>.....</p> <p>.....</p> <p>.....</p> <p style="text-align: right;"><b>(Total 3 marks)</b></p>	<p>Leave blank</p> <p style="text-align: center;"><b>Q4</b></p> <input style="width: 20px; height: 20px;" type="text"/>
<p>5. A graphologist is a person who claims to be able to assess someone’s personality from a specimen of his or her handwriting.</p> <p><b>Briefly</b> show how this claim could be scientifically tested.</p> <p>.....</p> <p>.....</p> <p>.....</p> <p>.....</p> <p>.....</p> <p>.....</p> <p>.....</p> <p>.....</p> <p style="text-align: right;"><b>(Total 3 marks)</b></p>	<p style="text-align: center;"><b>Q5</b></p> <input style="width: 20px; height: 20px;" type="text"/>
<p><b>TOTAL FOR SECTION A: 17 MARKS</b></p>	



**SECTION B**

**Answer ALL the parts of Question 6. Write your answers in the spaces provided.**

**Read the source on the separate insert and then answer the following questions.**

**For Questions 6(a) to (c), choose an answer, A, B, C or D, and put a cross in the box (☒). If you change your mind, put a line through the box (☒) and then put a cross in another box (☒).**

6. (a) In lines 19–20 Lord Winston states ‘But these lecturers have frequently been unwilling or unable to divulge the key information about the molecule – what it is, its structure, or how it is produced’.

From the information in the passage, the most likely reason for this is that

- A scientists do not cooperate with anyone else
- B they have not discovered anything yet
- C they cannot reveal commercial secrets
- D it is too complicated to explain

(1)

- (b) The “ownership of science”, mentioned in the title of the source, refers to those who

- A provide the research laboratories
- B choose science students’ courses
- C try to make money from science
- D make scientific discoveries

(1)



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(c) (i) In the last paragraph (lines 21–22) the conclusion is that “Commercial interest has meant that more and more scientific details may remain undisclosed”. The argument in the paragraph is an

- A argument based on analogy
- B argument based on authority
- C argument based on induction
- D argument based on deduction

(1)

(ii) It is stated (lines 20–21) that “This was the very information for which the registrants attended the meeting.” This is an example of

- A a fallacy
- B an opinion
- C a fact
- D a statistic

(1)



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**For Question 6(d), choose two of answers A, B, C, D, or E and put a cross in the two boxes (☒). If you change your mind, put a line through the box (☒) and then put a cross in another box (☒).**

(d) Which **two** of the following are reasoned conclusions to arguments used in the passage?

- A Scientists only work for financial reward
- B Astronomy is a waste of public money
- C Scientists are being forced to work in secret
- D University courses in literature are good value for money
- E Scientists should be allowed to speak freely

**(2)**

(e) In what ways does the nature of the evidence offered by Lord Winston support his conclusion that “commercial activity changes the ownership of science”?

*You must relate your answer to the content of the source. You are not being asked to give your own opinions on the matter, but should use thinking and analytical skills to judge the quality of the evidence and argument in the source.*

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SECTION C

There are three questions in this section. You should answer ONE of them. Write your answer in the space provided.

Put a cross in the box indicating the question you have chosen (☒).  
If you change your mind, put a line through the box (☒) and then put a cross in the other box (☒).

You are reminded that an appropriate conclusion to your argument is required.  
In answering the question you should consider arguments for and against the statement.

Chosen question number:    Question 7 ☒    Question 8 ☒    Question 9 ☒

7. “Technological innovation is sometimes a feature of human progress, but inventions can also have unforeseen adverse consequences.”

To what extent should we control the activities of inventors?

(17)

8. Examine the view that the media should not be allowed to advertise or support special diets unless there is absolute scientific evidence to show that the diets do what they claim.

(17)

9. “Many people read horoscopes every day.”

Examine the arguments **for** and **against** the idea that the predictions of astrologers should be taken seriously.

(17)

**Quality of Written Communication.**

(3)

(Total 20 marks)



**Write your answer to Section C here:**

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Section C

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**TOTAL FOR PAPER: 50 MARKS**

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