



## Numerical and verbal reasoning (19 questions, 25 minutes)

### Verbal reasoning

#### Text

Entrepreneurs running small firms play a vital role in ensuring a healthy economy, not just from a business perspective, but also in social, educational and political terms. They compete with the large businesses that would otherwise dominate the markets and are key providers of new jobs. Smaller businesses are able to accommodate working patterns tailored to the employee's needs. They are, therefore, valuable sources of employment for the large number of people with family responsibilities who wish to remain part of the labour market but are unable, because of domestic commitments, to take up full-time employment.

Base your answers **only** on the information given in the text

1. Entrepreneurs tend not to compete with large organisations.
  - a) True
  - b) False
  - c) Cannot say
  
2. Large businesses do not want to accommodate an employee's individual employment needs.
  - a) True
  - b) False
  - c) Cannot say
  
3. Small firms run by entrepreneurs provide no benefits for the community.
  - a) True
  - b) False
  - c) Cannot say
  
4. More new jobs are provided by entrepreneurs than large organisations.
  - a) True
  - b) False
  - c) Cannot say
  
5. Although Oliver Sacks seems to have no fears when he is inside his laboratory, daily life presents him with many more problems: he is afraid of horses, afraid of contracting all sorts of diseases which he reads about in his parents' books, afraid to cross the road or to walk on

the cracks between the paving stones. He also soon stopped practising his faith, although he still enjoys the traditions of Jewish festivals.

- a) Oliver Sacks has no fears when he is in his laboratory.
- b) Stepping on the cracks between paving stones causes Oliver Sacks anxiety.
- c) Oliver Sacks seems to be afraid of everything in his daily life.
- d) There are no horses in Oliver Sacks' laboratory.

6. In 1809 the German philosopher Georg Wilhelm Friedrich Hegel (1770-1831) received a letter from the Netherlands. At the time he had taken over as principal of the Grammar School (*Gymnasium*) in Nuremberg, while waiting for a professorship at a university. Before that time he had been a private tutor in Jena, and the Dutchman Pieter van Ghert had been one of his students.

- a) G. W. F. Hegel was offered a professorship in Nuremberg in 1809.
- b) The German philosopher Hegel taught the Dutchman Pieter van Ghert when he was principal of a Grammar School.
- c) Hegel was expecting a professorship in Nuremberg or Jena when he received a letter from the Netherlands.
- d) After Hegel, the German philosopher, had been a private tutor in Jena, he became the principal of a Grammar School.

7. What is the purpose of therapeutic cloning?

Stem cells are present in bone marrow, in umbilical blood and especially in very early embryos. Researchers want to use stem cells to propagate tissue cells for the treatment of patients whose organs no longer work properly. If, for example, the heart muscle has partially died off and weakened after a heart attack, new heart muscle cells could probably restore the function of the organ. And thanks to the replacement of damaged nerve cells in the spinal marrow, paraplegics might be able to walk once again. Expectations are high, but it will be several years before we can be sure that these possibilities are really feasible.

- a) A new heart can be grown with the aid of stem cells.
- b) In a few years time, stem cells will make it possible to cure patients.
- c) People may be able to walk again thanks to the introduction of new nerve cells into the spinal marrow.
- d) A stem cell can be both a heart muscle cell and a nerve cell.

8. On 16 November 1944, Ludwig Wittgenstein wrote a letter to his former student Norman Malcolm, who was then serving as a conscript in the US Navy. Wittgenstein recalled a remark that Malcolm had made five years earlier about the 'English character'. Wittgenstein claimed to be shocked by the 'primitive nature' of the comment. "I thought, what point is there in studying philosophy when all you gain from it is the ability to discuss a few obscure points of logic and when it does nothing to clarify your thinking on the more important issues of everyday life," he wrote.

- a) Norman Malcolm was studying with Ludwig Wittgenstein in 1944.
- b) Wittgenstein considered 'the issues of everyday life' a more important area for a philosopher to consider than a few obscure points of logic.
- c) In 1939, Malcolm made a remark about the English character which had to be shocking to a philosopher.

- d) Wittgenstein believed that the point of studying philosophy was to learn how to discuss a few obscure points of logic.

9. BRUSSELS - The pensions of many citizens of the European Union are under threat because of the ageing of the population in the next fifteen years. Without drastic measures there will be heavy budget deficits, which will in turn serve to undermine the value of the euro. The EU Ministers of Social Affairs are keen to develop a strategy to disarm this 'financial time bomb'.

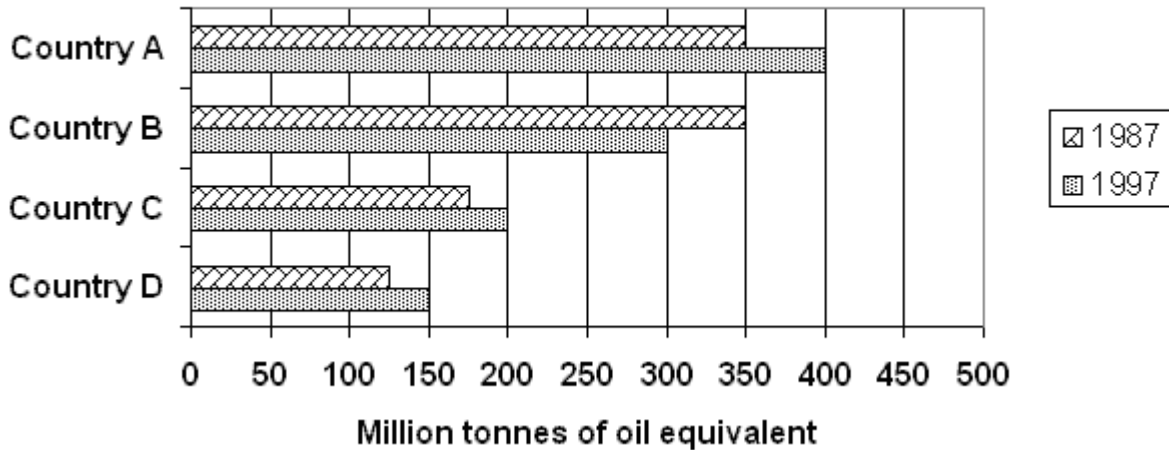
- a) If no measures are taken, it will not be possible to pay out pensions to European citizens in fifteen years time.
- b) There is a financial time bomb in Europe, caused by the ageing of the population.
- c) The value of the euro will be under threat if nothing is done to call a halt to ageing in Europe.
- d) The EU Ministers of Social Affairs have designed drastic measures to ensure the safety of European citizens' pensions.

10. A study shows that people who consciously eat less sugar can actually grow fatter as a result: it appears from the study that there is a negative connection between the consumption of sugar and fat. People who eat a lot of fat usually eat relatively little sugar and vice versa. Moreover, sugar is an important flavour enhancer, just like fat. If people leave out sugar, they compensate this either entirely or partly by eating more fat. Switching to low-calorie drinks where the sugar is replaced by artificial sweeteners has therefore no demonstrable effect on body weight.

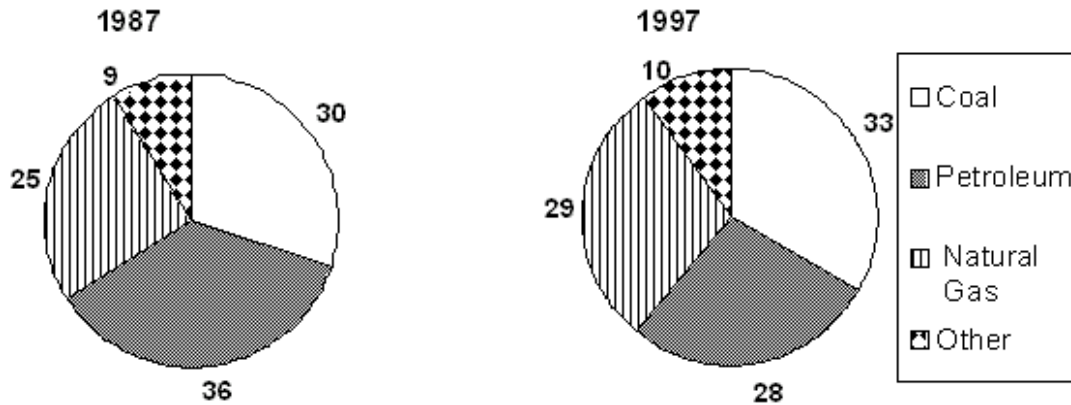
- a) Because sugar, like fat, is an important flavour enhancer, it is eaten a lot.
- b) Low-calorie drinks have a higher fat content than ordinary drinks.
- c) The negative connection between the consumption of sugar and fat means that people who eat less sugar can become fatter.
- d) People who leave out sugar from their daily diet compensate for it with artificial sweeteners.

## Numerical reasoning

### Energy Consumption



### Sources of Energy Consumption for Country A (in %)



1. In country A, which source of energy had the largest proportional change between 1987 and 1997?

- a) Coal
- b) Petroleum
- c) Natural gas
- d) Other

2. For country A in 1987 how much of the total energy consumption was provided for by coal?

- a) 85 Million tonnes of oil equivalent
- b) 95 Million tonnes of oil equivalent

- c) 105 Million tonnes of oil equivalent
  - d) 115 Million tonnes of oil equivalent
3. Which country showed the greatest percentage change in total energy consumption between 1987 and 1997?
- a) Country A
  - b) Country B
  - c) Country C
  - d) Country D
4. Country C anticipates that energy consumption per million population will increase at a rate of 10% a year from 1997. If the energy consumption of country B remains constant, how many years will it be before country C's consumption exceeds that of country B?
- a) 3 years
  - b) 4 years
  - c) 5 years
  - d) 6 years

**Population statistics – 1997**

Country	Area (sq.km)	Population (000's)	Annual births (per 1,000 population)	Annual deaths (per 1,000 population)	Percentage of population eligible to vote
A	89,000	9,000	13.9	9.9	74
B	375,000	20,000	11.8	9.4	69
C	100,000	11,000	10.5	8.4	71
D	388,000	35,000	12.1	8.9	66

5. Approximately how many people in country C are eligible to vote?
- a) 780,000
  - b) 3,200,000
  - c) 7,800,000
  - d) 32,000,000
6. Which country has the highest population per square km?
- a) Country A
  - b) Country B
  - c) Country C
  - d) Country D
7. Approximately how many people were born in country B in 1997?
- a) 2360
  - b) 236, 000
  - c) 472,000

d) 2,360,000

8. If, in a recent election in country A, only 45% of those eligible to vote turned out, approximately how many votes were cast?

a) 3,000,000

b) 4,050,000

c) 5,050,000

d) 6,000,000

9. Which country is currently growing in population by the largest number of people per year, ignoring immigration/emigration?

a) Country A

b) Country B

c) Country C

d) Country D

## MEGOLDÁS

	A	B	C	D
1.		X		
2.			X	
3.		X		
4.			X	
5.		X		
6.				X
7.			X	
8.		X		
9.		X		
10.			X	

	A	B	C	D
1.		X		
2.			X	
3.				X
4.			X	
5.			X	
6.			X	
7.		X		
8.	X			
9.				X