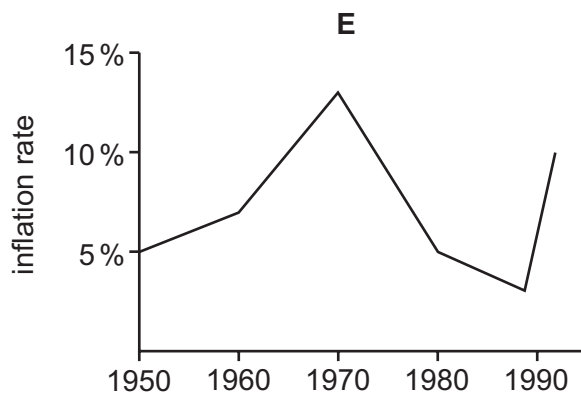
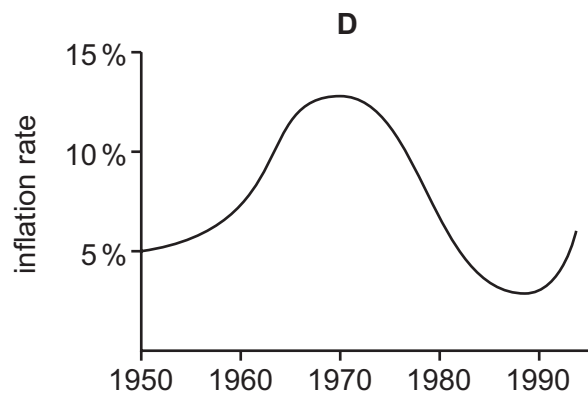
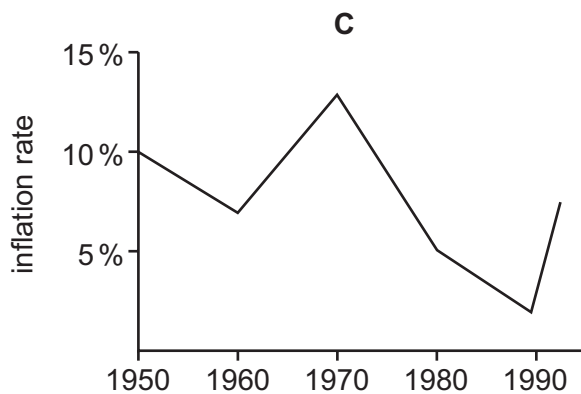
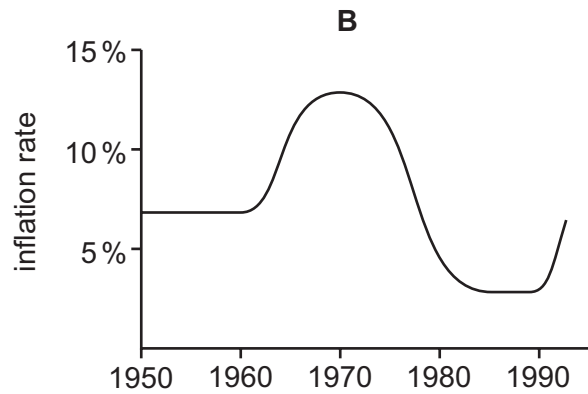
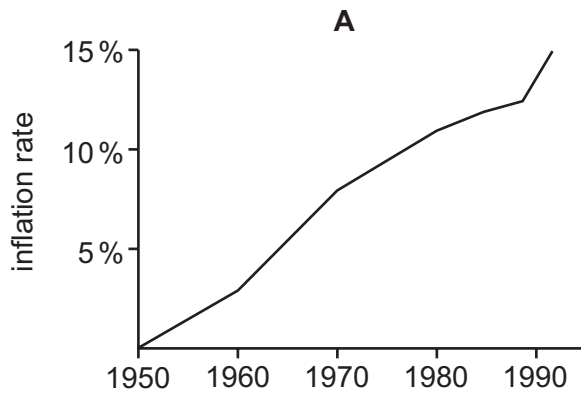


- 1 In Westland, during the 1950s, prices rose steadily at about 7% per annum. During the 1960s, higher wage demands caused prices to increase more and more rapidly throughout the decade. The Government decided to make control of inflation its prime objective and gradually the rate at which prices rose, year on year, began to fall. This continued throughout the 1970s until by the end of the decade prices were only rising at about 5% per annum. The first half of the 1980s saw price rises slow further, and by 1985 inflation had dropped to 3%. This was maintained until 1989 when a series of major bank failures caused high inflation over the following 3 years, as the currency fell sharply in value.

Which of the following graphs best represents the Westland inflation rate?



- 2 George's journey home from work involves travelling by underground railway to Euston Station and then by overground train. It takes him 5 minutes to change platforms on arriving at Euston. Overground trains leave Euston at 20-minute intervals and the train journey takes 8 minutes. His house is a five-minute walk from his local station. If he arrives at Euston at 4.15pm he gets home at 4.50pm.

At what time will he get home if he arrives at Euston at 5.00pm?

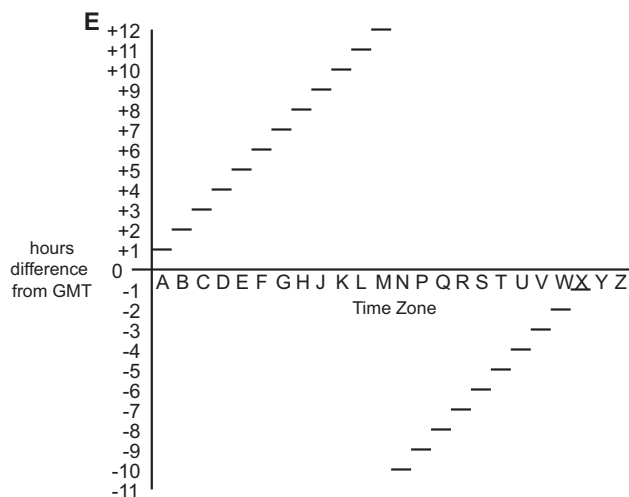
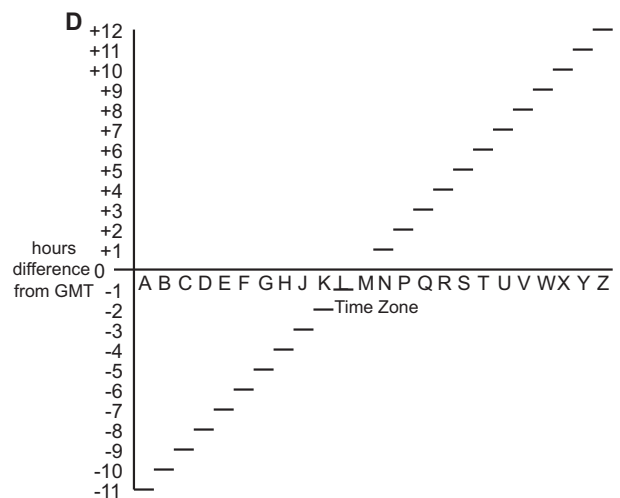
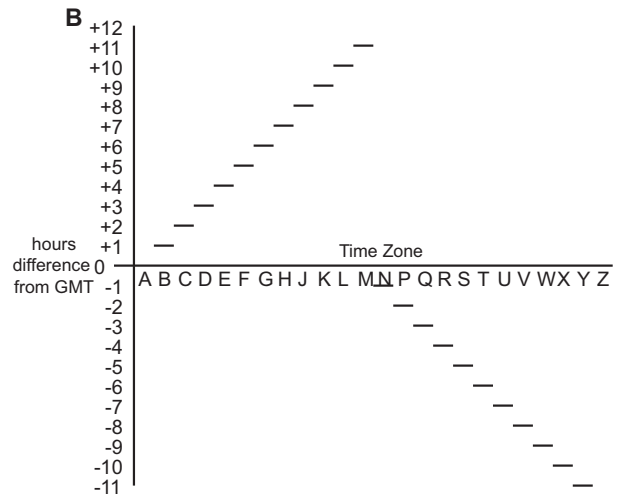
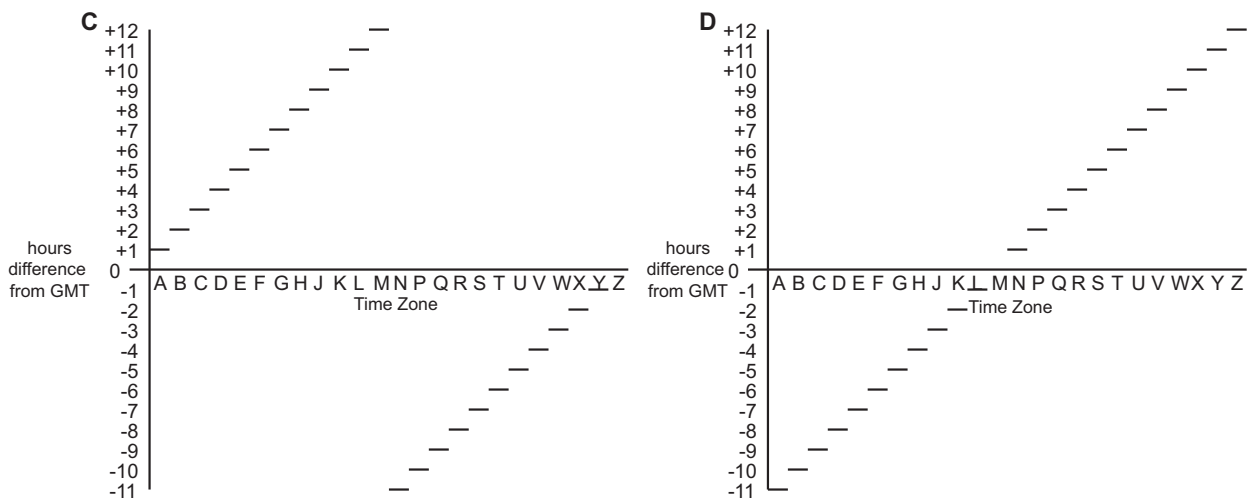
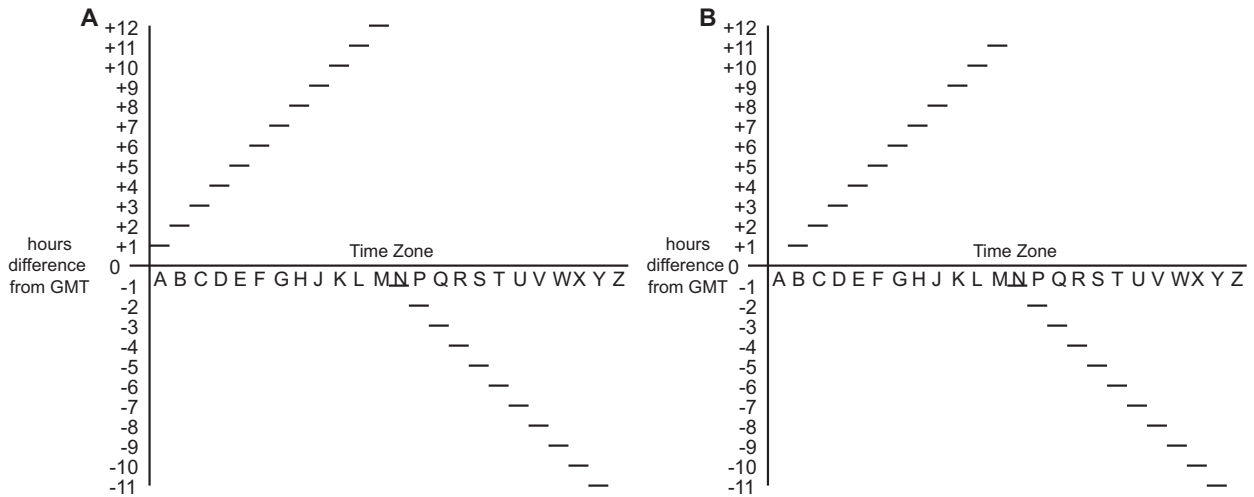
- A 5.18pm
  - B 5.25pm
  - C 5.30pm
  - D 5.33pm
  - E 5.35pm
- 3 Ben hires a motor van to help his friend move house. He knows that the round trip is 350 km and the van hire company tells him that the van does 100 km per \$10.00 worth of diesel fuel (the diesel costs 70 cents per litre). He asks them to put \$36.00 worth of diesel into the van. However the pump is faulty and actually puts in 51 litres of fuel for every 50 litres shown on the pump. On the return journey he encounters a fallen tree across the road and has to make a detour. There are no filling stations on the remainder of his journey, but he decides to get as near to his destination as he can.

What is the **maximum** distance the detour could have added to his journey if he still manages to make it back?

- A 7.2 km
- B 10 km
- C 17.2 km
- D 72 km
- E 82 km

- 4 There are 24 time zones around the world each of which differs by a whole number of hours from Greenwich Mean Time (GMT). These have been given letters from the alphabet, omitting I and O as these are too easily confused with 1 and 0. GMT is 'Z', with the hours ahead of GMT being A, B and so on. Once +12 hours is reached, the letters are then allocated starting at one hour behind and then continuing until Y which is for -11 hours.

Which of the following provide a look-up table with the letters in alphabetical order, omitting I and O?



- 5 There is a two-way express train service operating between Kuala Lumpur Central Station (KLCS) and Kuala Lumpur International Airport (KLIA), 64 kms away.

Which of the following pieces of information is **not** required in order to calculate the minimum number of trains needed to operate the service each day?

- A The first train leaves KLCS at 5.30am and the first train leaves KLIA at 6am.
  - B The journey between KLCS and KLIA (and vice versa) takes 28 minutes.
  - C On arrival at its destination each train stands for ten minutes before commencing its return journey.
  - D In peak hours (5.30am to 10.30am and 4.00pm to midnight, when the service terminates) trains run every 15 minutes.
  - E During off-peak hours (10.30am to 4.00pm) the trains run every 20 minutes.
- 6 Antioxidants in the foods we consume help to rid our bodies of destructive molecules that can cause cancer. Some foods, for example fruit and vegetables, contain high levels of antioxidants, so that the more of these foods someone eats, the higher is their intake of antioxidants. And the higher the intake of antioxidants, the lower the risk of getting cancer. A study has found that coffee is a rich source of antioxidants, and that Americans get more of their antioxidant intake from coffee than any other source. So, on average, Americans should have a relatively low risk of suffering from cancer.

Which of the following identifies the **flaw** in the above argument?

- A Some cancers are believed to be caused by genetic factors.
- B Antioxidants in coffee are as beneficial as those in fruit and vegetables.
- C People who drink a lot of coffee may suffer from anxiety and irritability.
- D The risk of cancer is affected by the level of intake of antioxidants, not by their source.
- E Antioxidants in food can protect against cancer only if they are absorbed into the body.

- 7 We have been told for many years that China is heading to become the next economic superpower. So you would think that universities would have responded to this opportunity. Yet I have only found four UK universities offering Chinese as a single subject this year while at least 40 are offering French as a single subject. The UK's economic future will be closely tied to that of China, but there's little chance that it will be successful so long as its higher education lives in the past.

Which of the following is an **implicit assumption** of the above argument?

- A Increasing the number of single-subject Chinese courses will increase the number of students taking Chinese.
  - B Knowledge of French Language and Literature will not contribute to the future success of the UK economy.
  - C Reducing the number of universities offering degrees in French will increase the number of universities offering Chinese.
  - D The demand by students for places at University to study Chinese is too low.
  - E The UK higher education system does not respond to the world outside it.
- 8 We should support the introduction of new identity cards that will contain biometric data, such as fingerprints and iris scans. The iris is part of the eye, and the pattern on the iris is a unique record of each individual that cannot be guessed or forged. That means it will be very difficult for criminals to forge or steal someone else's identity - a process often called 'identity theft'. These stolen identities are valuable to criminals as they can be used to buy goods and cover other illegal activities.

Which of the following, if true, would **most strengthen** the above argument?

- A New identity cards will be no bigger than a normal credit card.
- B The cost of the technology to produce the cards will reduce over time.
- C Current security devices, such as passwords, fail if people forget their passwords.
- D Current security devices, such as passwords, fail to prevent over 100 000 identity thefts per year.
- E The use of biometric data on passports will help to reduce illegal immigration.

- 9 Some world leaders and scientists believe that there is no such thing as global warming. They defend this by pointing out that Antarctic temperatures in the 1990s were the lowest ever and that the Antarctic ice sheet is thickening enough in the middle to create a 0.12 mm drop in sea levels each year. However, this is the worst kind of selectivity. The overall temperature trend is up and the edge of the ice sheet is melting by enough to cause a 0.16 mm rise in sea level each year. The net effect is clearly a rise in sea levels - one of the most accurate indications of a warming planet.

Which of the following is the best statement of the **main conclusion** of the above argument?

- A The belief about global warming of some world leaders and scientists is puzzling.
  - B Some world leaders and scientists should accept that sea levels are rising.
  - C Some world leaders and scientists are poorly informed about global warming.
  - D The rise in sea levels is evidence that the planet is getting warmer.
  - E The belief of some world leaders and scientists is based upon very selective evidence.
- 10 Businesses often use expensive incentive packages to keep their workers happy. However, research in the US showed that three-quarters of companies rated as the best places to work provided free snacks to their employees. One company even provided huge bowls of M&Ms, which were changed to a single colour when targets had been met. It is hard to imagine a simpler way of thanking workers for their efforts. The message from this evidence seems clear; if businesses want to have happy workers, they should provide free snacks rather than expensive incentive packages.

Which of the following is the best statement of the **flaw** in the above argument?

- A There is no information about how many companies in the US have adopted the free snacks approach.
- B It is not possible to draw a general conclusion about what businesses should do from the evidence of one company that provided free M&Ms.
- C The companies rated as the best places to work may have used free snacks as one of many incentive packages offered to workers.
- D There may be ways for companies to thank their workers that do not involve free snacks or incentive packages.
- E No evidence is provided to show that unhappy workers are less productive than happy ones.

- 11 Clark makes frequent journeys between the towns of Axeford and Barcastle. For the journey he can choose between the bus services named Direct and Loyalty. Direct charges the same fare of \$40 to all passengers at all times. Loyalty has a 'frequent user' discount system and charges \$50 for the first journey a passenger takes, \$49.75 for the second journey, \$49.50 for the third and so on. Each journey is 25 cents cheaper than the previous one until the fare reaches \$20, when there are no further reductions.

At what point would it become cheaper overall to use Loyalty rather than Direct?

- A the 41<sup>st</sup> journey
- B the 42<sup>nd</sup> journey
- C the 81<sup>st</sup> journey
- D the 82<sup>nd</sup> journey
- E the 121<sup>st</sup> journey

Use the following information to answer questions 12, 13 and 14.

Barchester Hospital provides Accident & Emergency (A&E) services to the town of Barchester and the surrounding countryside. Every patient who arrives at the hospital is immediately assessed and placed into one of three categories:

- CRITICAL      requiring immediate treatment to preserve life
- URGENT        requiring treatment quickly but life not in immediate danger
- ROUTINE        requiring treatment but no urgency, no danger to life

The manager of the A&E department keeps summary records of the number of patients in each group. For the purposes of these summary records 'critical' patients are sub-classified as those resulting from road accidents and those resulting from other causes.

The following shows the record for two weeks in July.

	Monday 1 <sup>st</sup>	Tuesday 2 <sup>nd</sup>	Wednesday 3 <sup>rd</sup>	Thursday 4 <sup>th</sup>	Friday 5 <sup>th</sup>	Saturday 6 <sup>th</sup>	Sunday 7 <sup>th</sup>	Monday 8 <sup>th</sup>	Tuesday 9 <sup>th</sup>	Wednesday 10 <sup>th</sup>	Thursday 11 <sup>th</sup>	Friday 12 <sup>th</sup>	Saturday 13 <sup>th</sup>	Sunday 14 <sup>th</sup>
Critical (road accident)	1	0	0	1	2	2	0	0	2	0	0	4	0	2
Critical (other)	0	0	0	1	0	0	1	1	0	1	1	0	0	0
Urgent	8	8	9	10	8	15	12	9	5	8	8	12	12	14
Routine	35	38	30	42	56	75	65	34	40	35	41	58	80	65

The A&E department is staffed by a team of doctors and nurses. The doctors and nurses work in 'work groups' of one doctor and four nurses. A 'work group' can deal with four 'routine' cases in an hour. 'Urgent' cases will usually take 90 minutes. 'Critical' cases take 3 hours and will usually require specialist staff drawn from other parts of the hospital. For planning purposes the department manager calculates the number of 'work group' hours of work required each day.

The receptionist estimates the waiting time (to the nearest half-hour) for routine patients by considering the number of patients currently in the waiting area. The following procedure is used:

- divide the number of routine patients by 4
- multiply the number of urgent patients by  $1\frac{1}{2}$
- multiply the number of critical patients by 3
- add these results together
- divide by the number of work groups to give the expected waiting time in hours.

- 12 One Saturday evening a shift started work at 6 pm and received 30 new patients. Of these 5 were urgent and one was critical. There were four doctors working with sixteen nurses.

What was the expected waiting time, in hours, for routine patients?

- A 1
  - B 2
  - C 3
  - D 4
  - E  $6\frac{1}{2}$
- 13 The staff of the department write notes about every patient they see. There are three copies of each patient's notes. One is retained in the A & E department, one is sent to the hospital central records and one is sent to the patient's family doctor. All 'critical' and 'urgent' patients have an extra copy made of their notes.

How many separate copies of notes were made on Monday 8<sup>th</sup>?

- A 104
  - B 132
  - C 134
  - D 142
  - E 176
- 14 How many 'work group' hours work were there on Thursday 4<sup>th</sup> July?
- A  $13\frac{1}{2}$
  - B 23
  - C  $25\frac{1}{2}$
  - D  $31\frac{1}{2}$
  - E 54

15 The table below shows the cost of sending letters within the United Kingdom.

<b>U.K. Letter Rates (second class)</b>			
<b>Not over</b>	<b>£ p</b>	<b>Not over</b>	<b>£ p</b>
<b>60g</b>	<b>0.21</b>	<b>400g</b>	<b>1.14</b>
<b>100g</b>	<b>0.35</b>	<b>450g</b>	<b>1.30</b>
<b>150g</b>	<b>0.47</b>	<b>500g</b>	<b>1.48</b>
<b>200g</b>	<b>0.58</b>	<b>600g</b>	<b>1.75</b>
<b>250g</b>	<b>0.71</b>	<b>700g</b>	<b>2.00</b>
<b>300g</b>	<b>0.83</b>	<b>750g</b>	<b>2.12</b>
<b>350g</b>	<b>0.94</b>		
Items heavier than 750g cannot be sent second class			

A firm wishes to send each of its customers four items by second class letter mail. Each item weighs just less than 250g. It can send the items separately or put more than one item in a package.

What is the cheapest postage charge to each customer that the firm can incur?

- A** £2.69
- B** £2.83
- C** £2.84
- D** £2.90
- E** £2.96

- 16 Internet businesses that specialise in selling babies to the highest bidder have nothing to do with care and everything to do with greed and exploitation. Modern technology brings fresh dimensions to the age-old problem of the desperate desire of couples to have children and the readiness of unscrupulous people to exploit that. Therefore all selling and buying over the internet should be banned.

Which of the following is the best statement of the **flaw** in the above argument?

- A It assumes that all childless couples would buy children if they had the opportunity.
  - B It ignores the fact that there are fewer children available for adoption than in the past.
  - C It assumes that children who are adopted are not shown much love and attention.
  - D It ignores the fact that it is the buying of babies that is wrong rather than the use of the internet.
  - E It assumes that many people who use the internet have no desire to buy anything on it.
- 17 A recent study examined the practice in schools of grouping children by ability for individual subjects - known as 'setting'. Setting has been advocated as the way to raise standards in schools. The study found that setting creates a set of expectations for teachers that overrides their awareness of individual capabilities. Teachers of the brightest pupils (the top set) assumed that their pupils could learn quickly and without difficulty. The consequence of this was that some pupils became demoralised and the standard of their work declined. The bottom set, on the other hand, experienced frequent changes of teachers and a continuous diet of low level work, which also led to demoralisation as well as lack of any opportunity to improve.

Which of the following could be drawn as a **conclusion** from the passage above?

- A Schools should not group children by ability for individual subjects.
  - B School is generally demoralising for many pupils.
  - C Teachers are insufficiently aware of the individual capabilities of pupils.
  - D Top sets never experience changes of teachers.
  - E Grouping children by ability in individual subjects does not always raise standards.
- 18 Meat eaters, in defence of their eating habits, often give the excuse that they (and we) do not have the teeth or the stomachs of natural herbivores, and therefore we must be carnivores. This is nonsense. We may not have the digestive equipment to eat raw grasses but nor do we have the teeth and digestion of predators: we are as far removed from the wolf as we are from the cow. Seeds, nuts, berries, leaves and roots are the natural diet of our closest relatives in the animal kingdom.

Which of the following best expresses the main **conclusion** of this argument?

- A It is nonsense to say that we must be carnivores.
- B Seeds, nuts, berries, leaves and roots are our natural diet.
- C We do not have the teeth or stomach to eat meat.
- D We are no more like wolves than we are like cows.
- E Eating meat is a disgusting habit.

- 19 Many women complain that there is a lack of equal opportunities in sport due to sexism. But in many sports, e.g. tennis or athletics, men and women cannot compete on equal terms because of differences in speed and power. Where something intervenes to eliminate this natural disadvantage, men and women have equal opportunities to participate. For example, there are as many female as male top riders in the equestrian sport of eventing because the horse eliminates the natural strength factor. So sexist attitudes are not the reason why men tend to dominate sport – it is because most sports lack an intervening factor that eliminates natural disadvantage.

After hearing this argument, one listener made the following comment:

‘There are no Formula One female drivers in motor racing’.

If true, does the comment

- A Strongly support the conclusion of the argument.
  - B Give only a little support to the argument.
  - C Neither strengthen nor weaken the argument.
  - D Slightly weaken the argument.
  - E Seriously undermine the argument.
- 20 Many societies believe that the earlier the age at which children went to school, the better. The learning process would thus begin as soon as possible, often just after a child’s fourth birthday. However, children who are given formal teaching before they are ready for it, may show more anxiety and have lower self esteem later in their school careers than other children. Children who are pressured to learn often achieve less academically and may face more problems in their personal relationships. Therefore all children should remain at home with a parent and given a chance to play until they are seven, the age at which formal schooling begins in many countries.

Which one the following is an **assumption** underlying the above argument?

- A All early schooling is based around formal teaching rather than play.
- B Often both parents in a family work full-time outside the home.
- C Children should be given a choice about the age at which they begin school.
- D Some children mature quicker and are keener to learn than others.
- E Lower self esteem causes more problems in later life than academic failure.

- 21 The Government is proposing to allow 14-year-olds to spend half of their school year at work, if they want to. This is because many in this age group are seen as being uninterested in what the schools are teaching. But what about those children who have been getting on with their school work and attending regularly? These children will have to put up with their uninterested classmates being allowed to get frequent breaks from the discipline and demands of school work. The effect will be to create a lot of unrest in the children left behind, an unrest which will turn into a lack of interest in school work. The Government's proposal will have the opposite effect to that intended: it will turn more children off what schools have to offer.

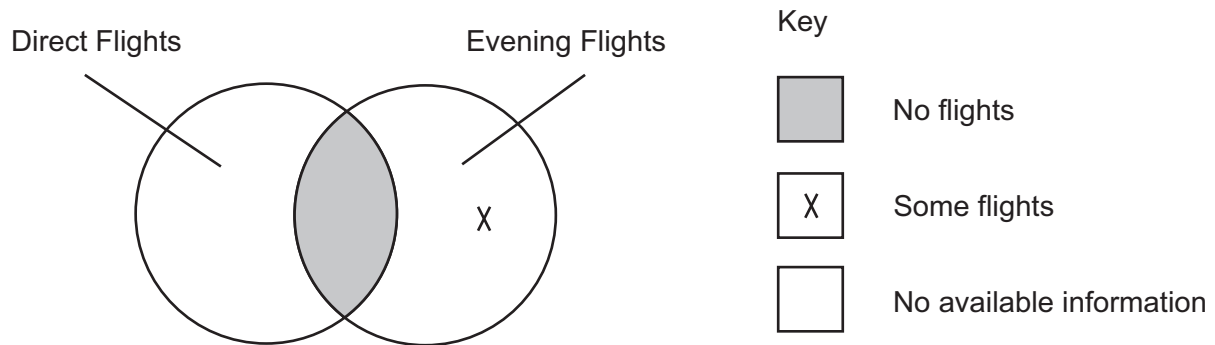
Which of the following, if true, would **most weaken** the above argument?

- A Many employers have expressed an interest in providing work placements for 14-year-olds.
  - B Children who are hard working at school are also likely to be hard working in employment.
  - C Some 14-year-olds want to spend more than half of their school year at work.
  - D Some 14-year-olds are uninterested in either school work or work placement schemes.
  - E Children who are uninterested in school work might be less so if they could spend part of their week working.
- 22 Advertisers have always assumed that television viewers watch adverts and that it is most effective to advertise during peak viewing hours in the early evening. It costs them much more to advertise during peak time. Recent research has shown that when the adverts come on, many viewers read, leave the room, switch to other channels, or talk to each other. The larger the group of people watching together, the more likely they are to talk, and therefore the less likely they are to watch the adverts. The research showed that later in the evening viewers become less likely to engage in these other activities, and are watching in smaller groups.

Which one of the following statements can be drawn as a **conclusion** from the above passage?

- A Television advertising is the least effective method of persuading people to buy.
- B People are unlikely to buy the products which are advertised on television.
- C The money spent on peak time advertising could be used on more effective ways of promotion.
- D Viewers who watch television in large groups concentrate less on the programmes.
- E Television viewers may talk to each other at the same time as watching the adverts.

- 23 I am planning to fly to Kuala Lumpur (KL) tomorrow evening and would prefer a direct flight. Flight availability is shown by the following Venn diagram.



Which of the following is a **conclusion** that I can draw from the information in the diagram?

- A I can get a direct flight to KL in the evening.
  - B I can get a direct flight to KL, but not in the evening.
  - C I can get a flight to KL in the evening, but not a direct one.
  - D I cannot fly direct to KL.
  - E I cannot fly to KL in the evening.
- 24 In an increasingly complex world, it is important to recognise that a solution to key global problems is more likely if a global authority emerges. We should encourage any moves to establish global organisations that have supreme authority over nation states. The important decisions that need to be made about issues such as environmental protection and world trade cannot be left to the voluntary co-operation of nation states, because they will tend to follow their own self interest. Only an international authority is in a position to rise above the self interest of individual nation states.

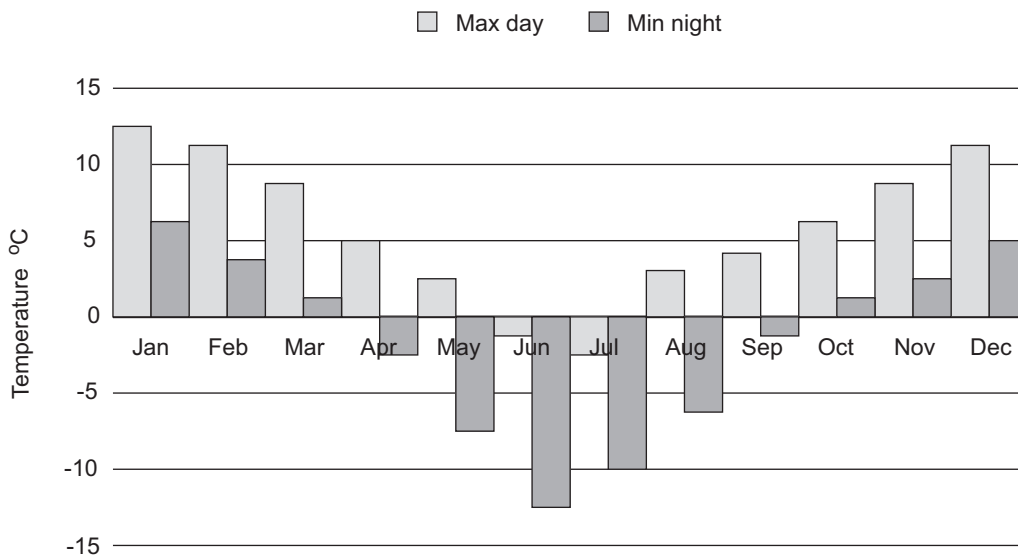
Which of the following best expresses the **main conclusion** of the above argument?

- A Global forms of organisation are the best way to tackle all global problems.
- B The establishment of global organisations with supreme authority over nation states should be encouraged.
- C A solution to key global problems is more likely if a global authority emerges.
- D Nation states will eventually disappear as a feature of world political organisation.
- E Only an international authority can rise above individual nation state interests.

- 25 Throughout the world, rare native species of wild plants are being wiped out by environmental changes caused by global warming, pollution and intensive agriculture. However, some plants developed for and grown in gardens, such as laburnum, are spreading into the wild. Therefore, if the traditional pattern of flora in the wild is to be maintained, environmental groups need to take action. Native species need special protection and the spread of garden plants needs to be halted.

Which of the following is an **assumption** underlying the above argument?

- A Garden plants are less sensitive to environmental changes than wild plants.  
 B Environmental groups will be successful in restoring the traditional pattern of flora.  
 C All garden plants are capable of thriving in the wild.  
 D Halting the spread of garden plants will help create the conditions for wild plants to thrive.  
 E No native species are capable of withstanding the effects of environmental change.
- 26 The graph below shows the average maximum daytime temperature and minimum night time temperature for the area of a nursery growing tender annual plants which may be killed by frost (i.e. if the temperature drops below 0°C).



For what period of the year would they expect to be able to keep the plants outside both day and night?

- A April to September  
 B June to July  
 C August to May  
 D September to May  
 E October to March

- 27 Arthur is working out the average number of goals per match for his hockey team over a season. He finds that it comes to exactly 4 goals per match. Later he realises that he has only averaged the 12 League matches and that in fact the team scored 47 more goals in their Cup matches. When he includes these, he finds that the average per game is different but still a whole number.

How many cup matches did the team play?

- A 5
  - B 7
  - C 10
  - D 12
  - E 19
- 28 Strokeball is a team sport. A match consists of four playing periods of 25 minutes each, with intervals of 10 minutes between periods. The Strokeball World Cup is currently being contested in Australia.

The semi-finals are to take place in Adelaide and Perth, and both matches were originally timetabled to start at 4pm local time, on September 5<sup>th</sup> (Adelaide is 1½ hours ahead of Perth). However, at the request of television companies who wish to broadcast the whole of both matches live, with a short interval in between, the authorities have decided to bring the start of the Adelaide match forward, so there will now be 30 minutes between the scheduled end of the Adelaide match and the start of the Perth match, which remains unchanged.

At what (local) time will the Adelaide match now start?

- A 1.20 pm
- B 1.50 pm
- C 2.40 pm
- D 2.50 pm
- E 3.20 pm

- 29 When I am due to embark upon a long car journey, I use the following formula to help me decide how long I should allow myself to get to my destination:

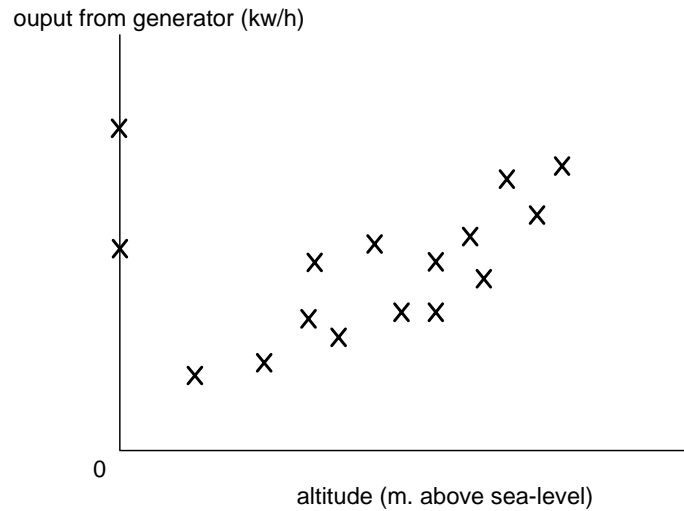
$$\text{Time in minutes} = \left( \begin{array}{l} \text{number of} \\ \text{kilometres} \\ \text{on motorways} \end{array} \times 0.6 \right) + \left( \begin{array}{l} \text{number of} \\ \text{kilometres} \\ \text{on other roads} \end{array} \right) + \left( \begin{array}{l} 30 \text{ minutes for} \\ \text{every complete} \\ 200 \text{ kilometres of journey} \end{array} \right)$$

I then round up the answer to the nearest multiple of  $\frac{1}{2}$  hour.

How long should I allow for a journey of 385 kilometres which includes 250 kilometres of motorway driving?

- A 4 hours
- B 5 hours
- C  $5 \frac{1}{2}$  hours
- D 6 hours
- E  $6 \frac{1}{2}$  hours

- 30** The average daily output of energy from 16 wind generators placed at different altitudes was compared, and the data recorded as follows. The two that were at sea level were situated offshore.



Which of the following can reliably be inferred from the above data?

- A** The best place for a wind generator is offshore.
- B** The output from inland wind generators tends to increase with altitude.
- C** The higher above sea-level a wind generator is placed the more energy it produces.
- D** Most wind generators are placed in hilly areas.
- E** There is no significant correlation between the altitude of a wind generator and its energy output.