

Question One

The 21st century is witnessing a significant rise in the proportion of people being diagnosed by medical professionals as having a mental illness. For example, at the turn of the century, the number of Canadians being treated for depression increased by over 30% in just one year. A recent study in the US found that nearly twice the number of young people there were diagnosed with a mental disorder in 2018 as compared to 2003. The World Health Organization estimates that by 2028, depression will be the second leading type of disability worldwide. It is clear that aspects of the modern world make it more difficult for people to maintain good mental health.

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

- A Changes in health care and a decrease in stigma attached to mental illness may be responsible for higher diagnosis rates.
- B Many people with a mental health diagnosis may be able to function well in society.
- C Significant numbers of people may be hesitant to seek help for mental health concerns from doctors or other medical professionals.
- D Some physical and behavioural factors may make mental health diagnoses more difficult.
- E In some cultures people may prefer to seek help for mental health concerns from religious leaders as opposed to doctors.

Question Two

In the game of tigball, two teams compete against each other to try to score points. Points are scored as follows: A 'penalty' scores 5 points. A 'tigdown' scores 8 points. A 'transformation' scores 3 points, but teams only have the opportunity to achieve a transformation after scoring a tigdown. There are no other ways of scoring points.

Which of the following is the only one that is a possible scoreline in the game of tigball?

- A 9–23
- B 11–21
- C 12–20
- D 13–14
- E 15–17

Question Three

In the UK we are increasingly engrossed by entertainment: we devote more time to it than sleep and spend more money on it than food and drink. The aim of entertainment is to create a make-believe situation in which emotions can be excited and discharged without affecting real life. While entertainment has its proper place, it can become a preoccupation, dominating our

thoughts and sapping our emotional energy. When this happens, the 'real' world of action starts to appear comparatively dull and tedious and this, in turn, undermines social cohesion. Our increasing use of entertainment is, then, threatening our wellbeing.

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

- A Our wellbeing depends on social cohesion.
- B People prefer entertainment to food and drink.
- C Viewers copy the behaviour they see in entertainment media.
- D Emotions pose a threat to society.
- E The general public are addicted to entertainment.

Question Four

Adults over the age of 60 are often depicted by the media as depressed, lonely and grumpy. Of course, old age is associated with physical decline, health issues become more common and memory gets fuzzier. Previously, theories of ageing assumed that emotional experiences would follow a similar pathway towards dysfunction. They were wrong. Recent research has shown that in old age negative emotions (like anger) wane, while positive emotions (like contentment) become more common. Why? Our lives undergo pronounced changes in later life. Work demands are eliminated, there is more time for leisure pursuits, and older people structure their environments in ways that reduce unnecessary stress. Time horizons shrink: people learn to spend their remaining precious time on the things that matter most.

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

- A Not everyone experiences the negative physical decline in old age often depicted in the media.
- B In old age people experience both positive and negative emotions less strongly.
- C Being freed from the demands of work allows retired people to feel happier.
- D Older people find better ways of avoiding stress and using their time productively.
- E Assumptions that the emotional aspects of ageing mirror the physical aspects were wrong.

Question Five

You are allowed to vote in the general election only if you are at least 18 years old. You have reached 18 so you will be able to vote in the forthcoming election. Which one of the following most closely parallels the reasoning used in the above argument?

- A You cannot obtain foreign currency from this bank if you cannot produce acceptable identification. You cannot produce the required identification, therefore we cannot let you have the foreign currency.
- B You can visit your grandmother in hospital providing you have no illness yourself. As you have no illness, you will be able to visit your grandmother.

C We can afford to go to America this year only if you save up sufficient money. You haven't saved enough so we will not be able to go.

D To win the jackpot prize in the national lottery you need a ticket with all six prize-winning numbers. When I heard you had won the jackpot, I knew you had the lucky ticket that matched all the numbers from the draw.

E Passport applications can only be accepted if photographs are witnessed as a likeness by someone in a professional job. Your application was refused so your witness cannot have been a professional person.

Question Six

A teacher is organising a trip to the local zoo for 20 students. Of the 20 students, 12 are aged 11–15 and 8 are 16–18 years of age. Tickets cost £12.95 per adult (16 years of age and over) and £9.95 per child (2–15 years of age). For every 4 students under 16 they must have one teacher supervising them. They will take the minimum number of teachers.

What was the total admissions price for the group?

A £199.00

B £223.00

C £259.00

D £261.85

E £287.75

Question Seven

- 7 The Pentarathon Challenge is a competition in which five athletes compete against each other in five marathon races, run on consecutive days.

Points are awarded in each race, as follows:

first place 7 points

second place 5 points

third place 3 points

fourth place 2 points

fifth place 1 point

This table shows the total points of the competitors in this year's Pentarathon Challenge after each race.

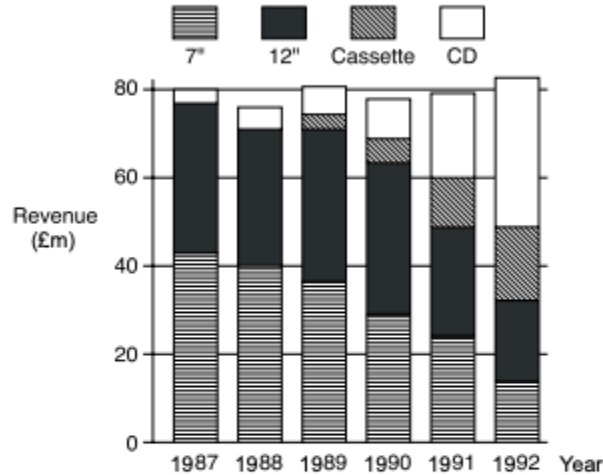
| <i>name</i> | <i>total points after race 1</i> | <i>total points after race 2</i> | <i>total points after race 3</i> | <i>total points after race 4</i> | <i>total points after race 5</i> |
|-------------|--------------------------------------|--------------------------------------|--------------------------------------|--------------------------------------|--------------------------------------|
| Colin | 7 | 9 | 10 | 12 | 17 |
| Jason | 1 | 4 | 6 | 13 | 14 |
| Kyle | 3 | 10 | 15 | 18 | 25 |
| Noel | 2 | 7 | 14 | 15 | 18 |
| Ray | 5 | 6 | 9 | 14 | 16 |

Who finished in a different position in each of the five races?

- A Colin
- B Jason
- C Kyle
- D Noel
- E Ray

Question Eight

- 8 Between 1987 and 1992 there were four formats of singles recordings: 7", 12", cassette and CD. The accompanying graph shows how total sales of singles were split between the four different formats in the years 1987 to 1992.



Which one of the following statements is false?

- A The revenue from sales of CD singles grew every year.
- B The revenue from sales of 7" singles fell every year.
- C The revenue from sales of 12" singles fell every year.
- D Sales of 7", 12" and cassette singles accounted for approximately 60% of the revenue from singles in 1992.
- E 1989 is the first year of those shown in which 7" singles accounted for less than half the revenue from singles.

Question Nine

A builder has 32 kg of a mix of sand and cement, of which 25% is sand. For a new job, he needs 120 kg of a mix of sand and cement in which the ratio of sand to cement is 2 : 1. To obtain this, he starts with his initial 32 kg mix and adds more sand and cement.

What is the ratio of the masses of sand and cement that he needs to add?

- A 4 : 7
- B 3 : 4
- C 5 : 3
- D 9 : 2
- E 12 : 1

Question Ten

- 13 I am planning to buy a new laptop. The following table shows the specifications and the prices of my shortlist.

| <i>laptop</i> | <i>processor speed (GHz)</i> | <i>memory (GB)</i> | <i>storage (GB)</i> | <i>graphics card memory (GB)</i> | <i>screen size (inches)</i> | <i>price (£)</i> |
|---------------|------------------------------|--------------------|---------------------|----------------------------------|-----------------------------|------------------|
| <i>Racer</i> | 2.7 | 4 | 500 | 2 | 15.6 | 600 |
| <i>Ledd</i> | 2.8 | 8 | 1000 | 4 | 17.3 | 850 |
| <i>SNSV</i> | 2.5 | 4 | 750 | 6 | 15.6 | 500 |
| <i>Pear</i> | 2.8 | 8 | 1000 | 4 | 13.3 | 1300 |
| <i>Elovon</i> | 3.0 | 16 | 1000 | 8 | 15.6 | 700 |

In terms of storage, the operating system and my files take up 300 GB. I would also like a laptop with a screen size of at least 15 inches. I am looking for the cheapest laptop that can run the following games (the minimum system requirements indicate the lowest possible value for each characteristic that would enable me to play these games):

| MINIMUM SYSTEM REQUIREMENTS OF GAMES | | | | |
|--------------------------------------|------------------------------|--------------------|---------------------|----------------------------------|
| <i>game</i> | <i>processor speed (GHz)</i> | <i>memory (GB)</i> | <i>storage (GB)</i> | <i>graphics card memory (GB)</i> |
| <i>OTAD</i> | 2.7 | 6 | 70 | 4 |
| <i>Kickman</i> | 2.5 | 4 | 80 | 4 |
| <i>Earthcraft</i> | 2.2 | 4 | 50 | 2 |
| <i>Near Scream</i> | 2.6 | 8 | 100 | 4 |

Which laptop should I buy?

- A Racer
- B Ledd
- C SNSV
- D Pear
- E Elovon