Ashoka Aptitude Test – Cambridge Thinking Skills Assessment (TSA)

What it tests?
- Problem-solving skills (includes numerical and spatial reasoning)
- Critical thinking skills (includes understanding arguments and reasoning, using everyday language)

Question types
- 50 MCQs, consisting of:
  - 25 problem-solving questions
  - 25 critical thinking questions

Duration
- 90 minutes

How to prepare?
- Designed to be taken with minimal preparation (a sample paper/model test has been uploaded on the website)

Not Mandatory but Highly Recommended, Why?

Candidates are assessed on both academic and non-academic parameters within the round in which they apply. In the earlier rounds, within the academic parameters, since only predicted scores/grades are available, chances of getting a Conditional Offer (instead of a Firm Offer) are higher. At any point within the Admissions Cycle, in the absence of a Standardized Test score or Grade XII/Equivalent Board score, decisions might be deferred till one or more of the above scores is available depending on the performance of the candidates in all other parameters. Taking the Ashoka Aptitude Test provides candidates with an extra parameter and a higher chance of getting a firm decision. Hence, this test is HIGHLY RECOMMENDED.

Ashoka Thinking Skills: Worked solutions

1 The effect of shortening degree courses at universities from three years to two would be that students would have two-thirds as much time to think about their subject. The result would be graduates whose understanding of their subject was shallower and whose intellectual development was much less extended. Any measure that leads to a lowering of the quality of graduates should be resisted by universities.

Which one of the following conclusions can reliably be drawn from the above passage?

A   University graduates at present have an in-depth understanding of their subject.

B   Universities should oppose the shortening of degree courses to two years.

C   Universities are not proposing to reduce the length of degree courses to two years.

D   Students should oppose moves by universities to shorten degree courses.

E   Universities should adopt more rigorous standards for the award of degrees.

The correct answer is **B.**

Justification
The structure of the argument is as follows:
Reason 1 (R1):   Reducing the length of degree courses would give students less time to think about their subjects.
Intermediate Conclusion (IC): Reducing the length of degree courses would mean a lower quality of university graduates.
Reason 2 (R2): Universities should resist any measures that lower the standard of graduates.
Therefore:
Conclusion (C): Universities should oppose the shortening of degree courses to two years (option **B**).

Distractors
A   This seems to be an implicit assumption of the argument, but it cannot be drawn as a conclusion.
C   No information is given about whether, as a matter of fact, this measure is being considered or not.
D   This cannot reliably be concluded, as we would need to assume that the drawbacks mentioned would outweigh any benefit to students from having shorter courses.
E   No support for this conclusion is given in the passage.

2   A dishonest act, such as stealing money from a handbag or cheating in school, may arise for one of many different reasons. But the reasons may be consistent with the personality of the individual involved. One child may steal, for example, in order to show off; another, to get money to support a hobby (or to get a birthday present for a younger sister); another, to express aggression or hatred against the person from whom he or she steals. One child may cheat in order to avoid punishment for academic failure; another, because of personal ambition; another to express contempt for the system.

Which one of the following is a conclusion that can be drawn from the passage above?

A   It is wrong to assume that a child who is dishonest in one kind of situation will be dishonest in others.

B   A child who cheats does so for very complex reasons.

C   A child whose motive is generosity towards someone else should not be blamed for stealing.

D   Underlying all dishonest acts is hostility towards others.

E   Children who are neither exhibitionist nor aggressive nor acquisitive are unlikely to steal money.

The correct answer is **A.**

Justification
The structure of the argument is as follows:
R1: Dishonest acts may arise for many different reasons.
R2: These reasons may be consistent with a child's personality.
IC (not stated): The question of whether a child will be dishonest in any given situation may depend on the interaction between the situation and the child's personality.
C: It is possible that a child who is dishonest in one kind of situation will not be dishonest in another.
This is equivalent to option **A**.

Distractors
B   A range of possible reasons for cheating are given, but it is still possible that each individual child who cheats has a single, straightforward reason for doing so.
C   The question of blame is not addressed in the passage.
D   This statement is contradicted by the passage, which mentions the possibility of stealing in order to buy someone a birthday present.
E   These categories are given as examples of personalities that may be motivated to steal for different reasons; however, there is nothing to suggest that this list is exhaustive.

3   It is not always clear whether a doctor should tell the truth to a patient or not. On the one hand, patients have a right to know what is the matter with them and what the future holds, so that they can make their own informed decisions, however upsetting the truth may be. It is a simple issue of human rights. But on the other hand, a patient's health may sometimes be better served by not knowing a frightening truth. For instance, a doctor may believe that a patient's medical condition will actually worsen if they realise how serious it is. Therefore, there are cases in which doctors have no choice: they must decide in favour of not telling the patient the truth.

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

A   Patients accept that a doctor has a responsibility to decide what will be in their best interests.

B   Doctors have a duty to conceal the truth if they believe it will frighten the patient.

C   Doctors have a duty to tell their patients the truth even when the truth would upset them.

D   Doctors have a greater responsibility for a patient's well-being than for their right to know the truth.

E   It is the responsibility of doctors to respect a patient's human rights whatever their medical condition.

The correct answer is **D.**

Justification
The structure of the argument is as follows:
Context: Patients have a right to know what is the matter with them etc.
However,
R1:   A patient's health may sometimes be better served by not knowing a frightening truth.
R2:   (e.g.) A doctor may believe that a patient's medical condition will actually worsen if they realise how serious it is.
Therefore:
IC: There are cases in which a doctor has no choice: they must decide in favour of deceiving the patient.
Therefore:
C: It is not always clear whether a doctor should tell a patient the truth. In order to draw this conclusion, we must assume that the doctor's responsibility is for the patient's wellbeing, not the truth.
This is the thrust of option **D.**

Distractors
A   There is no requirement to assume that the patients accept anything. The argument is entirely about doctors' responsibilities, regardless of patients' wishes, rights, etc.
B   R1 implies that sometimes the truth may frighten patients but the criterion for not telling them the truth is not whether it will frighten them but whether (the doctor believes) it will harm them medically.
C   This is a contrary assumption to that of the argument.
E   This is also contrary to the conclusion.

4   A two-month study of major producers of ivory products showed that worldwide
     demand for elephant tusks for ivory had fallen sharply. Therefore, it is safe to assume
     that there will be a general decline in elephant poaching.

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

     A   There are far fewer elephants than there were ten years ago, so poachers are
              finding it increasingly difficult to make a living from the ivory trade.

     B   Poachers now use high-powered rifles which make it easier for them to kill
              larger numbers of elephants than was possible in the past.

     C   The worldwide demand for ivory fluctuates considerably at certain times of
              the year, so poachers store up ivory to sell when the market improves.

     D   More and more synthetic materials are being used as substitutes for ivory in
              the construction of such things as piano keys and billiard balls.

     E   The worldwide demand for ivory has been falling consistently for the last
              twenty years and many ivory poachers have found alternative sources of
              income.

The correct answer is **C.**

Justification
The conclusion is that it is safe to assume there will be a decline in elephant poaching. It is
based on the single premise that a two-month study has shown a fall in demand for ivory.

Clearly there is a big gap in this argument, and any evidence to the effect that the two month
trend is untypical will weaken the case. Option **C** does this by claiming that demand for ivory is
seasonal.

Distractors
A   If anything this would strengthen the conclusion, by offering another reason why the
poaching may decline. Certainly it does nothing to weaken it.
B   The method by which poachers kill elephants is irrelevant to the argument that there will be
less poaching.
D   This clearly strengthens the argument by suggesting that there is less need for ivory as a
construction material.
E   Again this strengthens the argument, by adding further evidence that the ivory trade is in
decline.

5   The government blames schools and teachers for boys underperforming. However, science tells a different story. Evolutionary biology shows that females have evolved to have better verbal and emotional skills than males because of the need in prehistoric times for women to take the lead in bringing up children. By contrast, the need for males in prehistoric times to hunt in packs for food has made males more prone to violence and also skilled at calculating and planning. Neurologists have added to this insight by showing that the male hormone testosterone has an adverse impact on language skills. So clearly differences in educational performance between boys and girls cannot be explained in terms of failing teachers.

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

A   It assumes that scientific explanations apply to the average male or female ignoring exceptions.

B   It assumes that biological differences come in degrees and are not absolute.

C   It assumes that skills in calculating and planning have a role in educational performance.

D   It assumes that the differences in performance between the sexes are due solely to biological differences.

E   It assumes that teachers are not trying to improve the performance of failing boys.

The correct answer is **D**.

Justification
The structure of the argument is as follows:
Context: Girls are outperforming boys in educational achievement, and the government blames schools and teachers for this.
However,
R1:   Evolutionary biology shows that men and women have evolved to have different skills.
R2:   Neurologists have shown that male hormones adversely affect language skill
IC (not stated): It is possible that biological factors could lead to differential educational performance between boys and girls.
C: Differences in educational performance between boys and girls cannot be explained in terms of failing teachers.

There is a clear gap in the reasoning between the intermediate conclusion and the main conclusion: we have identified a possible cause of educational differences, but we cannot conclude either that it is in fact a cause, or that it is the only cause, without further support/assumptions. This is the thrust of option **D**.

Distractors
A   No claim is made about the performance of individual boys or girls, so it is not necessary to make this assumption.
B   The question of whether biological differences come in degrees or are absolute is not directly relevant to the argument.
C   This is not assumed; the fact that boys are thought to be more skilled in these areas but still perform worse than girls educationally would actually suggest the opposite.
E   Making this assumption would have no effect on the validity of the argument: the claim is that teachers' behaviour is not relevant to educational differences between boys and girls.

6   If I do more work tonight, I will earn more money. However, if I go for a bike ride, I will get fitter. I need to get fitter more than I need more money. So, I will go for a bike ride.

Which one of the following most closely parallels the reasoning in the above argument?

A   If I eat that cake it will taste really good. But if I do not eat that cake I will lose weight. I don't care about losing weight anymore! So I'm going to eat that cake.

B   If I learn to drive I will have a useful skill. If I save my money I will be able to travel round the world. I need to be able to drive, but I can learn that later. So I will travel the world while I am young.

C   If I work every evening in a bar, I will be able to buy my own clothes. But, if I stay in and do my homework, I will get better grades. Right now it is more important to me to earn my own money, but I know I will regret it if I get bad grades. So I will only work two evenings a week.

D   If I do the housework, the house will be clean and pleasant. If I go to the pub, I will be relaxed and pleasant. I prefer a pleasant me to a pleasant house, so I will go to the pub.

E   If I go out now, I will have fun with my friends. However, if I go out, I will not do my homework, and if I don't do my homework my teacher shout at me in front of my friends. So I had better not go out.

The correct answer is **D.**

Justification
The structure of the argument is: If X then Y; But if P then Q; I need Q more than Y; Therefore I will do P.
In the stem; X= I do more work tonight; Y= I will earn more money. P= I go for a bike ride; Q= I will get fitter.

In **D**; X= I do the housework; Y= the house will be clean and pleasant; P= I go to the pub; Q= I will be relaxed and pleasant.

Distractors

A   is of the form: If X then Y; But if not X then Z; I don't care about Z therefore I will do X.
B   is of the form: If X then Y; If P then Q. I need Y but can postpone it; Q is unique and cannot be postponed. Therefore Q.
C   is of the form: If X then Y; But if P then Q; Right now Y is more important than Q but I'll regret not-Q; So C (half X and half Q).
E   is of the form: If X then Y; But if X also Z and if Z then A; So not X.

7 There has recently been concern about people who have had blood transfusions. Some blood donors have gone on to develop CJD, the human form of BSE i.e. 'mad cow disease'. There is a small chance that people who have received this blood may also go on to develop CJD. However the risk is small, there is nothing that can be done about this disease, and informing the patient will cause anxiety. For all these reasons, the NHS should not take steps to inform those people who may be at risk.

Which one of the following applies the principle used in the above argument?

A   Not informing air passengers during turbulence of the small risk of damage to the plane.

B   Not informing patients that they are suffering from a terminal disease.

C   Not informing passengers of the reason for a train being unavoidably delayed.

D   Not informing adopted children as to the identity of their biological parents.

E   Not informing young children of poor results in diagnostic educational tests.

The correct answer is **A.**

Justification
The structure of the argument is:
R1   Some blood donors have gone on to develop CJD.
R2   There is a small risk that people receiving this blood will also contract CJD.
R3   However the risk is small and there is no cure for CJD.
R4   If informed it will cast a shadow over the rest of their lives.
C   People at risk in this way should not be informed of the risk
The principle underlying this argument can be expressed as:
'People should not be informed when a risk of something happening is small and where nothing can be done to prevent the thing happening, when to inform them would cause anxiety.' **A** illustrates this principle.
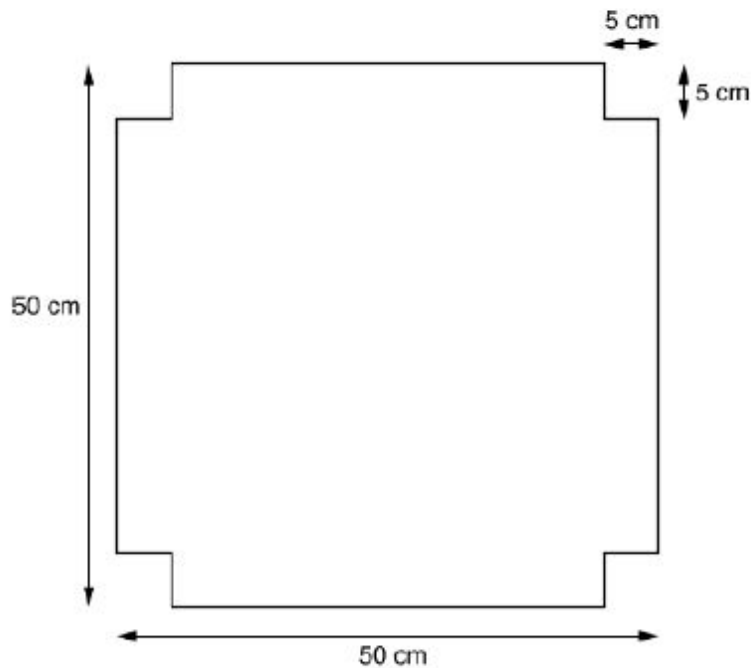
Distractors
B   This is not a situation of possible risk but of a certainty, therefore the principle does not apply.
C   No real risk is involved here and passengers may be able to take some action e.g. get off at the next station.
D   This situation involves withholding information to protect others (i.e. biological parents) rather than the individual from whom information is being withheld.
E   Here, the reason for withholding the information does not satisfy two of the three criteria given in the passage (small risk; nothing can be done about it).

8   A manufacturer wishes to make an open-topped box out of the piece of cardboard shown below by folding up its sides.

What is the volume of this box in cubic centimetres?

A   1600

B   2400

C   8000

D   10125

E   12500

We can see from the diagram that the sides of the box are 5cm wide. If all four sides are folded up the box will have a width of 40 cm and a length of 40 cm. Its height will be 5 cm.

Its volume will be 40x40x5 = 8000 cm^3

The answer is **C**.

9   The following table gives figures for the percentage growth per year of labour
    productivity per person per year in various countries during three periods.

	Period 1	Period 2	Period 3
Japan	8.5	3.0	3.2
France	5.4	3.0	2.6
United Kingdom	3.6	1.5	2.4
Belgium	3.3	2.8	2.3
Sweden	4.1	1.5	1.8
Denmark	4.3	2.6	1.7
Italy	6.3	3.0	1.6
Netherlands	4.8	2.7	1.6
Germany	4.5	3.1	1.6
United States	2.2	0.0	0.8

Which country's percentage growth per year remained consistently greater than half of
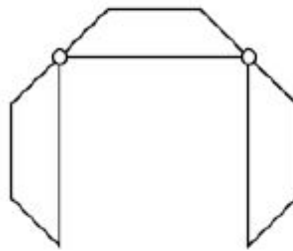its Period 1 level throughout the following periods?

A   France

B   United Kingdom

C   Germany

D   Denmark

E   Belgium

To solve this question we need to find values in the period 2 and 3 columns
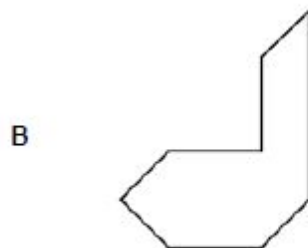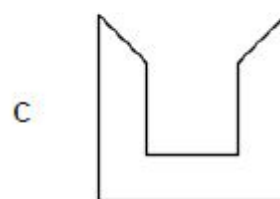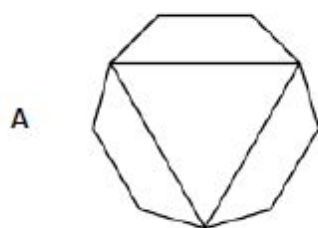that are greater than half of the period 1 column for that country.

Belgium has a period 1 figure of 3.3. Half of 3.3 is 1.65. The period 2 value
for Belgium is 2.8, the period 3 value is 2.3. Both 2.8 and 2.3 are greater than
1.65. No other country meets the criteria.

The answer is **E**.

10 The diagram below shows a rather unusual conference table which may take up a range of configurations. The three pieces are hinged together at the points shown by the circles:

Which of the following shapes could **NOT** be made from this table?

A

B

C

D

E

To solve this question you need to appreciate the effect of rotating the components of the table around the hinges shown on the diagram. Option D cannot work because it would require one of the sections to be hinged at a different corner.

The answer is **D**