
UCAT VERBAL REASONING QUESTION PACK 1

2019

Time allowed: 21 minutes

The examination consists of one section:

Section 1 - Verbal Reasoning

1. Looks at your ability to think logically about written information.
You will have 21 minutes to answer 44 questions.

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Section 1 – Verbal Reasoning

In the exam you would have one minute to read this section.

In this section of the exam, you will be presented with 11 passages to read, each associated with 4 questions.

Some questions assess critical reasoning skills, requiring candidates to make inferences and draw conclusions from information. You will need to read the passage of text carefully. You will then be presented with a question or incomplete statement and four response options. You are required to pick the best or most suitable response.

For other questions, your task is to read each passage of text carefully and then decide whether the statement provided follows logically. There are three answer options you can choose from:

True: On the basis of the information in the passage, the statement is true.

False: On the basis of the information in the passage, the statement is false.

Can't Tell: You cannot tell from the information in the passage whether the statement is true or false.

Candidates are only able to select one response.

You have 21 minutes to answer 44 questions. It is in your best interest to answer all questions as there is no penalty for guessing.

All unanswered questions will be scored as incorrect.



The Stanford Prison Experiment was a famous psychological experiment carried out at Stanford University in 1971. The experiment lasted 6 days and was an investigation into the effects of perceived power in a controlled environment. The research was led by Professor Philip Zimbardo, who had a particular interest in how societal positions of power and validation of antisocial behaviour can lead “ordinary” individuals to commit acts they would have previously deemed immoral.

Twenty four male college students, who had been shown to be psychologically healthy and stable in preliminary tests, were selected as subjects. The group were then randomly assigned the roles of “prison guard” or “prisoner” in a simulated prison within the university walls. Measures were taken to ensure a feeling of authenticity; prisoners were “arrested” by the local Police Department who carried out full booking procedures and assigned them numbers as their new identities. There were four cells, to hold three prisoners each, a closet for solitary confinement, a corridor to serve as the prison yard and a larger room for the guards and warden. Prison guards were given authoritarian uniforms and batons, while prisoners were to wear dehumanising smocks. Shifts were assigned to guards along with a strict schedule for prisoners.

Zimbardo instructed prison guards not to physically harm prisoners or withhold food and drink. He however states that their autonomy, individuality and privacy are to be taken away – that guards will have all the power and they will have none.

The results of the experiment were notoriously shocking; prisoners appeared to internalise their roles whilst guards became increasingly cruel – some showing genuine sadistic traits. This led to the experiment being curtailed at 6 days, rather than the projected 14.

1. Which statement most accurately describes the layout of the simulated “prison” in the Stanford Prison Experiment?

- A** - Four cells holding three “prisoners”, a corridor for solitary confinement and access to a small outdoor yard.
- B** - Three cells holding four “prisoners”, a closet for solitary confinement and a larger room as a “prison yard”.
- C** - Four cells holding three “prisoners”, a closet for solitary confinement and a corridor as a “prison yard”.
- D** - Three cells holding four “prisoners”, a dark room for solitary confinement and a small corridor as a “prison yard”.



2. Which statement best summarises the objectives of the Stanford Prison Experiment?

- A - To investigate how best to rehabilitate repeat offenders in the US prison system.
- B - To investigate the origins of cruelty amongst prison guards.
- C - To investigate the psychological effects of imprisonment.
- D - To investigate the psychological effects of perceived power.

3. Which of the following does not describe the participants of the Stanford Prison Experiment?

- A - College students
- B - Male
- C - Aged 21 to 30
- D - Psychologically healthy and stable

4. Which of the following statements best describes the duration of the experiment?

- A - 6 days in total, as planned
- B - 6 days instead of the original 14 days
- C - 7 days instead of the original 10 days
- D - 10 days in total, as planned



Norway is one of the wealthiest countries in the world and has a very high standard of living compared to other European countries. In 2016, its GDP per capita was reported as \$70,000 - the same as Luxembourg and Switzerland and the highest of all nations that are not islands or microstates. There are a number of factors that contribute to its rich and successful economy. First and foremost, its population is small in comparison to its much greater land mass. It has both flourishing fishing and agricultural industries, and is further blessed with rich natural resources. In 1969, the Ekofisk field, a natural oil field in the Norwegian North Sea, was discovered. According to the Norwegian government, the oil and gas sector accounts for 23% of the country's value creation and it is the world's fifth largest oil exporter. However, there are a number of differences between Norway and other oil-rich countries that has led to the development of its successful economy. The wealth gained from the oil industry is reinvested more evenly in society than in other exporter countries. This is largely as the result of a buffer fund set up in 1995 to absorb excess cash flow generated from regional oil profits, rather than simply reinvesting the money into oil finding and production. The government then declared that only 4% of this fund could be used for current projects, therefore "saving" the money for future generations. The buffer fund from oil profits currently contains over \$890bn, equating to \$170,000 per citizen. This fund ensures that when the oil runs out, Norway's economy can remain afloat.

5. **Which of the following statements describes the buffer fund set up by the Norwegian government?**

- A** - Set up in 1995, it absorbs excess cash flow generated by regional oil companies for reinvestment into Norway's future generations
- B** - Set up in 1969, it ensures that profits generated by regional oil companies are reinvested into the finding and production of oil
- C** - Set up in 1995, it ensures that 50% of profits generated by regional oil companies is reinvested in public projects
- D** - Set up in 1985, it absorbs 4% of excess cash flow generated by regional oil companies to fund future generations' pensions



6. What is the name of the natural resource discovered in Norwegian waters in 1969?

- A - Scandinavian Oil Reserve
- B - Norwegian North Sea Oil Field
- C - Efofisk Oil Field
- D - Norwegian Oil Reserve

7. What is the current estimated value of the Norwegian buffer fund?

- A - Nine hundred and ninety million dollars
- B - Eight hundred and ninety billion Norwegian kroner
- C - Nine hundred and eighty billion Norwegian kroner
- D - Eight hundred and ninety billion dollars

8. According to the Norwegian government, the oil industry accounts for what percentage of Norway's value creation?

- A - 2.3%
- B - 32%
- C - 23%
- D - 3.2%



Passage 3 of 11 (VRTF0002)

Renal transplantation (kidney transplantation) is the treatment of choice in patients with end stage renal disease (ESRD) as an alternative to dialysis. It significantly increases the patient's life expectancy and reduces the costs of care. It is estimated that the cost saving per person is £25000 a year. Current guidelines recommend that all patients with stage 4 or 5 chronic kidney disease likely to require a renal replacement within six months are considered for transplantation.

Kidneys are recovered either from living or deceased donors. While living donations typically come from known donors, deceased donors are generally anonymous. They are classified as either donation after brain death (DBD) or donation after cardiac death (DCD). These kidneys are allocated based on a waiting list, with priority given to patients with matching genetics, paediatric recipients, and patients unlikely to reject the kidney. The most common placement of the kidney is in the right lower quadrant of the abdomen. This is preferred as the blood vessels here are closer to the surface of the skin. There are three key areas that must be joined: the artery, the vein, and the ureter, which is joined into the recipient's bladder. A small tube called a stent can be placed in the ureter to reduce the risk of obstruction but must be removed within a few weeks to minimise the risk of infection.

Medical complications of renal transplant are generally related to rejection, immunosuppression, and infection. Early surgical complications include bleeding, blood clots in the artery or vein, leaks, collection of fluid, and wound complications. Late complications include obstruction of the ureter and narrowing of the transplant artery. Urological complications are the most common surgical complications and can compromise the function of the donor kidney, increasing the risk of complications and fatality.

9. Living donors may be divided into DBD and DCD.

True

False

Can't tell

10. The most common placement of the kidney is in the right lower quadrant as the vessels are deep to the surface.

True

False

Can't tell



11. Urological complications occur early post-transplantation.

- True
- False
- Can't tell

12. Patients with Stage 5 chronic kidney disease are not eligible for renal transplantation.

- True
- False
- Can't tell



Passage 4 of 11 (VRTF0011)

Artificial selection is the way in which desirable alleles are transferred to the offspring whereas undesirable alleles are removed. Domestication is the process by which a population of animals or plants is changed at the genetic level through a process of selection, in order to highlight traits that benefit humans. Most domesticated species of animals and plants have been 'bred' in this way suggesting that most plants and animals we are familiar with are not actually "natural" and may not have similar genetics to their close relatives.

Most scientific studies and experiments have both risks and benefits attached. Groups such as farmers, animal welfare groups and veterinary doctors can debate the issues surrounding the research and assess any risks and benefits which have been found. However, scientists in themselves may be slightly biased in means of the methods they use to carry out experiments. Different scientists are likely to have different beliefs about morals and religion and this could affect the performance or design off the experiment.

Selective breeding may be advantageous to a farmer due to the higher profit margins received. In the case of a cattle farmer, using selective breeding can lead to higher yields of meat and/or milk. One method of selective breeding cattle, which farmers use is called artificial insemination (AI). The semen from a bull can be used to inseminate many cows. As the yields of the meat products and dairy products increases, the farmers are able to charge the customer less and sustain their competitiveness within the market. Cattle with certain traits may be more desirable to the consumer, and this leads to increased sales.

13. Domestication is the process by which a population of animals or plants is changed at the environmental level.

True

False

Can't tell

14. Veterinary doctors are not able to discuss the risk and benefits of studies and experiments.

True

False

Can't tell



15. Artificial insemination is form of selective breeding.

- True
- False
- Can't tell

16. All farmers charge their customers less as the yield of meat products increases.

- True
- False
- Can't tell



Passage 5 of 11 (VRTF0023)

Sri Lanka has hired two hangmen as it prepares to carry out four criminal executions - the first in 43 years. This follows an announcement by the president that four prisoners convicted of drug offences have been sentenced to the death penalty. The hanging will end a moratorium on capital punishment that has been in place since 1976.

In Sri Lanka the crimes of rape, drug trafficking and murder are punishable by the death penalty, however there have been no executions since 1976. President Maithripala Sirisena has reportedly reinstated capital punishment to clamp down on the illicit drug trade in Sri Lanka. Political analysts say these actions will aid his popularity in the run-up to an election due to take place by the end of the year.

"I have signed the death warrants of four," President Sirisena said. "They have not been told yet. We don't want to announce the names yet because that could lead to unrest in prisons." He further stated that across the country there were 200,000 drug addicts and 60% of prisoners were in jail due to drug related offences.

The UK, France, Norway and the EU have condemned Sri Lanka's decision to renew capital punishment. "The death penalty is a cruel, inhuman and a degrading punishment, and the EU unequivocally opposes its use in all circumstances and all cases," said an EU spokesperson. "While the Sri Lankan authorities have cited the need to address drug-related offences, studies show that the death penalty fails to act as a deterrent to crime."

Amnesty International were quoted stating that they were "shocked" and "outraged" by the announcement and argued that executions for drug-related offences were unlawful because they did not meet the threshold for "most serious crimes", such as premeditated murder. "At a time when other countries have come to the realisation that their drug control policies are in need of reform, and are taking steps to reduce the use of the death penalty, Sri Lanka is bucking the trend," said Biraj Patnaik, AI's South Asia director. "This will be devastating to the country's international reputation and we hope that President Sirisena will reconsider his decision," he added.

17. Sri Lanka repealed the death penalty in 1976.

- True
 False
 Can't tell



18. Only people with drug convictions are going to be executed.

- True
- False
- Can't tell

19. 60% of people in Sri Lankan jails could be eligible for the death penalty.

- True
- False
- Can't tell

20. The passage reveals that the United States has condemned the move.

- True
- False
- Can't tell



Passage 6 of 11 (VRTF0019)

Jeremy Hunt's campaign chief has suggested that Boris Johnson worsened matters for Nazanin Zaghari-Ratcliffe, the jailed British-Iranian mother, when he was foreign secretary. In 2017 Mr Johnson said that she was teaching journalism while she was in Iran. The Iranian regime cited his comments as evidence that she had engaged in propaganda, and it charged her with a second set of offences. She denies all the charges. She and her employer, the Thomson Reuters Foundation, said she was visiting her family. Sir Patrick McLoughlin, chairman of Mr Hunt's campaign, said that Mr Johnson's language had "not helped". Ms Zaghari-Ratcliffe, 40, was arrested at Imam Khomeini airport in Tehran in April 2016, while travelling with her young daughter, and sentenced to five years in jail for spying. The second set of charges are unresolved.

Mr Johnson said yesterday that he felt a "deep sense of anguish" over the case but that responsibility lay solely with the Iranians. Mr Johnson, on Sky News's Sophy Ridge on Sunday, said: "I think that is incredibly important that we in the UK do not unwittingly give aid and succour to the people who are really responsible. The people who are responsible are the Iranian Revolutionary Guard, and anything you do to exculpate them is, I think, a great shame."

Sir Patrick told the programme: "Obviously Iran is responsible for holding somebody in their jail. I think some of the language that Boris has used has not helped." Ms Zaghari-Ratcliffe and her husband recently ended a 15-day hunger strike. Richard Ratcliffe, who had been camping outside the Iranian embassy in London, told The Observer yesterday: "Of course it's not all [Mr Johnson's] fault. Clearly we are camped here because the Iranian authorities are imprisoning Nazanin, but he should take responsibility for his mistakes.

Some of extract taken from 'Nazanin Zaghari-Ratcliffe: Mother held in Iran 'not helped...' www.thetimes.co.uk/edition/news/nazanin-zaghari-ratcliffe-mother-held-in-iran-not-helped-by-boris-johnson-gaffe-khdjrvrxf

21. Nazanin Zaghari-Ratcliffe was training journalists in Iran.

- True
 False
 Can't tell



22. Boris Johnson is accused of having contributed to the evidence against Nazanin.

- True
- False
- Can't tell

23. Boris Johnson has apologised for his comments in parliament regarding the case.

- True
- False
- Can't tell

24. Nazanin Zaghari-Ratcliffe recently spent more than two weeks on hunger strike.

- True
- False
- Can't tell



Passage 7 of 11 (VRTF0015)

The Mount St. Helen eruption was caused by the Juan de Fuca Plate and the North American Plate which lie on a destructive plate boundary. The Juan de Fuca Plate (oceanic crust) moves eastward towards the North American Plate (continental crust) where it is forced downwards (this is also known as a subduction zone). This movement generates friction which can manifest as earthquakes and, due to an increase in temperature, destroys the oceanic crust. Volcanic eruptions take place where, and when, the magma rises to the Earth's surface. Due to this activity over the centuries a series of volcanic eruptions formed the Cascades mountain range. Mount St. Helens had been inactive for over 120 years and therefore people did not expect it to erupt and had built their homes and livelihood around it, not knowing that it could cause such a tragedy.

The tremors began on the 20th March when there was a minor earthquake which measured 4.1 on the Richter scale. These tremors continued over the next couple of days, until there was a small eruption of steam and ash. By early May the north side of the mountain began bulging by 1.5m a day which led to a build up of magma and an increase in overall pressure. Though the bulge had reached a mile in length by the end of April, the plentiful plumes of smoke and seismic activity had begun to dissipate. Officials found it increasingly difficult to maintain the evacuation and the media.

An earthquake of magnitude of 5.1 struck and caused the bulge to move forwards and downwards. This material formed a landslide of rock, glacier ice and soil. This water (after being displaced from Spirit Lake) moved down the Northern fork of the Toutle Valley. The floodwater carried on and sediment blocked the port of Portland on the Columbia River. The exposed magma exploded sideways, this sent out blasts of volcanic gas, steam and dust, it moved up northwards for 25km. Every form of life was destroyed. Within three days, the cloud of fine ash reached the east coast of the USA. Within a span of a week, the ash had completely 'encircled' the world.

25. The oceanic crust is destroyed due to friction causing an increase in temperature.

- True
 False
 Can't tell



26. Everyone expected Mount St Helen to erupt.

- True
- False
- Can't tell

27. Some humans survived the earthquake.

- True
- False
- Can't tell

28. The port of Portland was blocked due to the earthquake.

- True
- False
- Can't tell



The word osmosis is derived from Greek word osmos, meaning “to push”. For the process of osmosis, three conditions are required: a dilute solution, a concentrated solution and a semi-permeable membrane which separates the two solutions. This membrane allows some molecules to pass through.

In most animals which live in the sea, the concentration of dissolved chemicals in their cells is the same as that of the sea water. Therefore their cells are in equilibrium as water molecules enter and leave the cell at the same rate, however this does not work on fresh-water animals. The concentration of chemicals in their body is much higher than in fresh water and therefore water is constantly entering their bodies through osmosis.

Animals, including human beings, which live on the land lose water all the time to the environment. Examples include sweating, panting and urine formation so they need to replace this water loss all the time otherwise cells will become dehydrated and this will eventually leading to cellular dysfunction (i.e. shrinking).

The effect of osmosis can be seen during the action of anti-diuretic hormone (ADH) on kidney tubules. When more ADH is secreted, the cells of the kidney tubules become more permeable to water, so more water is re-absorbed into the bloodstream by osmosis, leading to a smaller quantity of urine passed.. When less ADH is secreted, the cells of the kidney tubules become less permeable to water and so less water is re-absorbed. This leads to large quantities of dilute urine being passed.

29. The semi-permeable membrane allows passage of molecules.

- True
 False
 Can't tell

30. Water loss may occur during defecation.

- True
 False
 Can't tell



31. ADH acts on kidney tubules only.

- True
- False
- Can't tell

32. Concentration of chemicals in fresh water is lower than in the body of most animals.

- True
- False
- Can't tell



Passage 9 of 11 (VRTF0006)

The programme on ITV entitled “Being Paul Gascoigne” gave real footage into the life of the famous footballer and his journey through alcohol addiction. The programme brought to life the fact that even celebrities and public figures can be brutally affected by the psychological and physical impact of alcoholism. It was interesting to see the various schemes which Gascoigne used to combat his alcoholism, and it even detailed some costs that were incurred for these.

Gascoigne also underwent detoxification. Detoxification or 'detox' entails taking a short course of a medicine to aid the prevention of withdrawal symptoms when you stop drinking alcohol. The most commonly used medicine for detox is chlordiazepoxide. This facility is available from the GP, who can prescribe such drugs for patients looking to quit alcohol. Patient.co.uk offers healthcare advice and is set up by two general practitioners - Dr Tim Kenny and Dr Beverley Kenny. It is a factual website and offers a simple definition of alcohol detoxification, it is therefore very likely to be reliable and as it is offering impartial advice there is little need for bias/ vested interest.

However, having tried this treatment Gascoigne had a serious reaction to the drugs and was later admitted on life support. A simple alcohol problem, and the use of treatment had lead to a near death experience and weeks in intensive care unit - “he was hooked up to tubes, oxygen pumps...”.

33. Patient.co.uk is set up by general practitioners.

- True
 False
 Can't tell

34. Everyone who has an alcohol addiction undergoes detoxification.

- True
 False
 Can't tell



35. Celebrities and public figures may be impacted by alcoholism.

- True
- False
- Can't tell

36. Schemes to combat alcoholism may incur costs.

- True
- False
- Can't tell



In 1985 a study was performed to assess all people born in the year 1970 and screen them for anorexia nervosa. 23 girls (1 dropped out) and 2 boys fulfilled the diagnostic criteria and they were mixed with another screening population of 26 girls and 1 boy born between 1971-4. A control group was selected from the same school classes, they were matched for multiple factors including age and sex, with no history of an eating disorder.

Global assessment of function (GAF) was assessed via a scale where a score of <60 was indicative of poor psychosocial functioning. Full symptomatic recovery was assessed as being symptom free for more than 6 months. Psychiatric treatment was assessed as having received psychotherapy treatment on 8 or more occasions and Prognostic factors were those that occurred before anorexia nervosa onset.

This study is the first prospective, longitudinal study of adolescent onset anorexia based in the community. It had matched controls with no history of an eating disorder and there are no conflicts of interest. In comparison to previous literature reviews this study showed a more positive outlook for adolescent anorexia with less chronic cases (12% as opposed to 20%) and no deaths.

However, the sample size is small and the participants were only assessed on 4 separate occasions, this is a limitation to results and the illness can change a lot during that time which would not be recorded. Thus this isn't an accurate description of the disease timeline.

37. Global Assessment of Function is a reliable method of assessing psychosocial function.

- True
- False
- Can't tell

38. This study's validity can be questioned as there were conflicts of interest.

- True
- False
- Can't tell



39. Members of society were selected for a control group, one factor that was matched was their hair colour.

- True
- False
- Can't tell

40. To be referred to as having a full symptomatic recovery the participant must have been symptom free for more than 3 months.

- True
- False
- Can't tell



An oligopoly describes a market in which there are a small number of dominant firms. Concentration ratios are used to provide a good indicator of oligopolistic market structures; these measure the market share of the biggest firms in the market. Oligopolies are also described using market conduct and behaviour. An oligopolistic firm affects its rivals through its price and output decision, but its own profit can also be affected by how the rivals react. Competitive oligopoly displays reactive market behaviour and interdependence amongst firms.

Competitive oligopolies exist when rivals firms are interdependent, in the sense that they must take account of the reactions of one another when forming a market strategy, but independent in the sense that they decide market strategies without cooperation or collusion. A collusive oligopoly is one in which firms cooperate for resources for example, research and development projects, the firms' aims are to achieve a joint-profit maximisation.

The kinked demand curve can be used to illustrate how a competitive oligopolist may be affected by a rival's reaction to its price and output decisions. In order to anticipate how sales might be affected following a price change, firms must have an idea of the demand and revenue curves. However, in imperfectly competitive markets, firms do not have this information and therefore there is a level of uncertainty as a firm can only estimate how demand changes when the firm changes the price it is charging. This represents that the firms are dependent on each other's reactions and there is a level of uncertainty, as one firm's pricing decision can have repercussions in a competitive oligopoly.

41. Competitive oligopolies must take into account actions of rivals.

- True
 False
 Can't tell

42. Firms may affect profit margins of other firms.

- True
 False
 Can't tell



43. In imperfectly competitive markets, firms have full knowledge on the demand and revenue curves.

- True
- False
- Can't tell

44. Competitive oligopoly is defined as a market with more than 4 dominant firms.

- True
- False
- Can't tell



END OF EXAM PAPER

And breathe! Take a break and then come back and mark this paper to see how you've done.

I bet you smashed it!!

