



Il test ufficiale di ammissione a

MEDICINA in INGLESE

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gli Originali

scelti da 8 studenti su 10



Ministero dell'Istruzione, dell'Università e della Ricerca

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ADMISSION TEST FOR THE DEGREE COURSE IN MEDICINE AND SURGERY

Academic Year 2019/2020



General Knowledge and Logical Reasoning

- 1** A study involving a brain-training exercise was carried out on more than a thousand adults aged 65 and over, some of whom later developed dementia. Results showed that the benefits of the five-week mental agility course undertaken by some of the adults lasted for at least five years. This led to an improvement in everyday activities such as money management and the ability to do housework. If those with trained brains developed dementia, they did so later than those in the control group. The results also showed that, for those people in the study who developed dementia, after the diagnosis their mental decline occurred faster than for those who had not undertaken the training.

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

- A** Keeping the mind active delays the onset of dementia.
 - B** All over-65s who undertake brain training live for at least five years afterwards.
 - C** Older people do not perform mentally challenging tasks unless forced to do so.
 - D** People do a decreasing amount of housework as they grow older.
 - E** It is preferable to have swift mental decline once dementia develops.
- 2** Once again it has become fashionable for householders to replace their carpets with wooden floors. Sales of laminate and solid floors, such as oak, have seen a massive increase in the last ten years. This trend seems more in tune with our eco-friendly aspirations: carpets are often plastic-based and use vast quantities of underlying material, or underlay, made from petrochemicals. For this reason, it seems unlikely that wooden floors will go out of fashion in the near future.

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

- A** Most types of laminate and wood floors use petrochemicals in their manufacture.
- B** Not all wooden floors need a layer of underlay.
- C** Carpets can harbour dust mites and allergens.
- D** Sales of carpets made of synthetic materials have decreased in the last ten years while woollen carpets have seen an increase.
- E** Wooden floors may look longer-lasting but can be more easily damaged than carpets.

- 3** According to the current mainstream scientific view, Near Death Experiences (NDEs) are explicable in purely physiological terms. Specifically, they are caused by cerebral anoxia (oxygen deficiency in brain tissue), which occurs in a dying brain. On the other hand, recent research on hundreds of successfully resuscitated cardiac patients found that only twenty per cent reported NDEs. If NDEs had purely medical causes then most of the patients should have experienced them, since they had all been clinically dead and experienced cerebral anoxia. NDEs therefore do not have purely physiological causes.

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

- A** NDEs are not necessarily caused by physical events alone.
- B** Not all clinically dead patients have NDEs.
- C** NDEs are a physical property of the human brain.
- D** NDEs are caused by oxygen deficiency in the brain.
- E** Not all successfully resuscitated cardiac patients have NDEs.

- 4** Increasingly, the quality of a teacher, and of his or her lessons, is to be judged by feedback from their pupils. This is dangerous, as pupils have a tendency to focus too much on whether or not they enjoyed the lesson, in other words, on how much 'fun' they found it. The purpose of education, however, is not to keep children entertained; it is not to make their lives more fun. Arguably, it is not even to make them happier, per se. The purpose of schools is to make their pupils better, more educated people. This is all that matters, and therefore it is whether the teacher succeeds at this – not at being a children's entertainer – that counts.

Which one of the following is a flaw in the above argument?

- A** It fails to consider that enjoying lessons could result in pupils ending up better educated.
- B** By simply asserting that the purpose of education is not even to make people happier, the argument rests on a questionable contention.
- C** It patronises young people by thinking that their judgement will be based solely on how much fun they found the lesson.
- D** It doesn't specify precisely what it means by making someone a better, more educated person.
- E** The comparison with being a children's entertainer is an unfair exaggeration of what a teacher tries to do by making lessons more fun.

- 5 Researchers have tried to establish reasons for a recent drop in the catch of marlin near the Madeira coast. This drop cannot be explained by environmental conditions; there was no significant change in the temperature or composition of the region's water. Nor could one blame the human factor, because the size of the fishing fleet, catch quotas and pollution levels have been strictly observed. The environmentalists then analysed the records of the fishing catch of marlin over the last six centuries. This research identified that regular five-year periods of significant decrease in the catch alternated with fifteen-year periods of gradual growth of the catch. In view of this, the study concluded that the current drop in the marlin catch is part of a long-term cycle related to fish migration and food-chain balance.

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

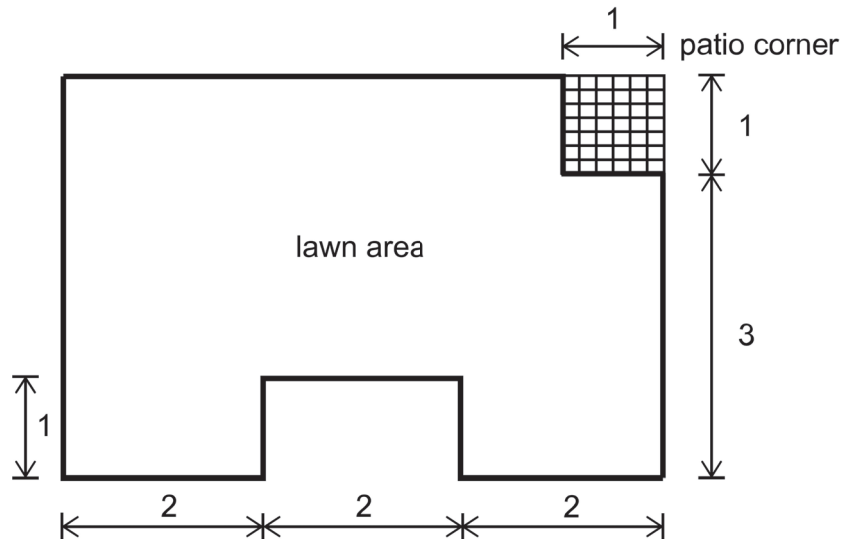
- A The records provide accurate information about the catch of marlin off the Madeira coast.
 - B The change in fishing technology has affected the change in the fishing catch.
 - C There is no correlation between the fishing catch today and the deep-sea stock of marlin in the sixteenth century.
 - D The fishing catch of marlin around Madeira does not depend on the condition of the water around the island.
 - E Climate change did not affect the temperature of ocean water off the Madeira coast.
- 6 A student packs books into a box which is 20 cm high, 30 cm wide, and 40 cm long. She ties string around the box in the pattern shown. A further 20 cm of string is needed for a knot.



What length of string is needed to tie up her box?

- A 3.8 m
- B 5.4 m
- C 2.0 m
- D 2.6 m
- E 2.9 m

7 The plan of a domestic lawn with dimensions in metres is shown below.



The lawn area is to be reseeded. Seed must be applied at the rate of 50 grams per square metre.

Appropriate grass seed is available only in the following quantities:

| grass seed packet prices | |
|--------------------------|--------|
| 1.6 kg | £20.00 |
| 1.2 kg | £16.50 |
| 1.0 kg | £14.00 |
| 500 g | £8.00 |
| 200 g | £3.00 |
| 100 g | £2.00 |

What is the least amount of money that needs to be spent to buy sufficient seed to reseed the lawn?

- A £16.00
- B £13.50
- C £14.00
- D £16.50
- E £22.00

- 8 Five girls competed in five events at their sports day. The following scoring system was used for each event:

| | |
|--|----------|
| 1 st place | 6 points |
| 2 nd place | 3 points |
| 3 rd place | 1 point |
| 4 th /5 th place | 0 points |

Before the events started, each girl nominated the event in which they wished to play their joker card – this doubled the number of points gained in that event. The table below shows the results of each event and the athletes' final points scores:

| <i>competitor</i> | <i>800 m run</i> | <i>100 m hurdles</i> | <i>high jump</i> | <i>long jump</i> | <i>shot put</i> | <i>total points scored</i> |
|-------------------|------------------|----------------------|------------------|------------------|-----------------|----------------------------|
| <i>Tia</i> | 4 th | 1 st | 5 th | 3 rd | 3 rd | 14 |
| <i>Jessica</i> | 1 st | 3 rd | 1 st | 5 th | 4 th | 19 |
| <i>Carolina</i> | 3 rd | 4 th | 2 nd | 1 st | 2 nd | 14 |
| <i>Kelly</i> | 2 nd | 2 nd | 4 th | 2 nd | 5 th | 12 |
| <i>Helena</i> | 5 th | 5 th | 3 rd | 4 th | 1 st | 13 |

How many of the girls won the event in which they had elected to play their joker?

- A 3
- B 1
- C 2
- D 4
- E 5

9 At the Shawilde Theatre, tickets are priced as follows:

Front stalls £35
Centre stalls £28
Rear stalls £20

Every row in the theatre contains 30 seats.

Last night's performance was a sell-out and the ticket sales were £21 000. Exactly 60% of this income came from tickets for the centre stalls, and the rest was split equally between the front stalls and the rear stalls.

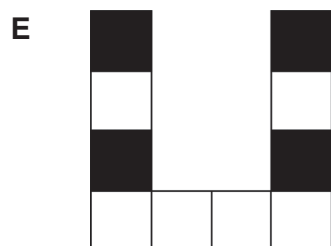
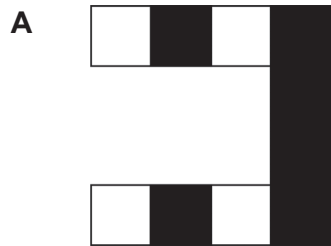
How many rows of seats make up the centre stalls at the Shawilde Theatre?

- A 15
- B 11
- C 19
- D 22
- E 26



Four of the following five pieces can be fitted together to make the above pattern.

Which one of the pieces is NOT needed?



- 11** Which one of the following literary works does NOT originate in the corresponding country?
- A** The Poems of Rumi – China
 - B** The Tale of Genji – Japan
 - C** Oedipus Rex – Greece
 - D** The Divine Comedy – Italy
 - E** Don Quixote – Spain
- 12** Which one of the following composed the opera *Madama Butterfly*?
- A** Giacomo Puccini
 - B** Giuseppe Verdi
 - C** Gioachino Rossini
 - D** Georges Bizet
 - E** Richard Wagner
- 13** Which one of the following plays by William Shakespeare is NOT set in Italy?
- A** A Midsummer Night's Dream
 - B** Much Ado About Nothing
 - C** Othello
 - D** The Taming of the Shrew
 - E** Romeo and Juliet

- 14** Which one of the following writers is the author of the novel *To Kill a Mockingbird*?
- A** Harper Lee
 - B** Georges Simenon
 - C** Iris Murdoch
 - D** Elena Ferrante
 - E** Ernest Hemingway
- 15** The 'prisoner's dilemma' is a common example analysed in the field of
- A** Game theory
 - B** Chaos theory
 - C** Asymptotic theory
 - D** Network theory
 - E** Quantum theory
- 16** Who was the first woman to be awarded a Nobel Prize?
- A** Marie Curie
 - B** Mother Teresa
 - C** Grazia Deledda
 - D** Selma Lagerlöf
 - E** Doris Lessing

- 17** Which one of these events in world history happened most recently?
- A** The October Revolution in the Russian Empire
 - B** The fall of the Western Roman Empire
 - C** The Taiping Rebellion in China
 - D** The building of the Taj Mahal
 - E** The crowning of Charlemagne
- 18** Which one of the following religions is NOT considered to have been revealed to or founded by an individual?
- A** Hinduism
 - B** Confucianism
 - C** Islam
 - D** Christianity
 - E** Buddhism
- 19** The governance of modern states is often based on the separation of which three powers?
- A** Legislative – executive – judicial
 - B** Legislative – elective – jurisprudential
 - C** Electoral – regulatory – jurisprudential
 - D** Regulatory – executive – judicial
 - E** Legislative – elective – executive

- 20** The Constitution of the Italian Republic was enacted on 22 December 1947 by
- A** The Constituent Assembly
 - B** The Supreme Court
 - C** The Ministry of Justice
 - D** The Ministry of Defence
 - E** The Government
- 21** Which one of the following is NOT a stated purpose of the United Nations?
- A** To encourage peaceful trade between nations
 - B** To maintain international peace and security
 - C** To develop friendly relations among nations
 - D** To achieve international co-operation in solving international problems
 - E** To be a centre for harmonizing the actions of nations
- 22** Which one of the following countries did NOT adopt the coins and banknotes of the Euro as its currency on 1 January 2002?
- A** Sweden
 - B** Austria
 - C** Portugal
 - D** Luxembourg
 - E** Finland

Biology

23 Which of the following rows are correct about these naturally occurring biological molecules?

| | <i>biological molecule</i> | <i>presence of carboxylic acid groups</i> | <i>presence of 2 or more hydroxyl groups</i> |
|-------|----------------------------|---|--|
| row 1 | ALL amino acids | yes | no |
| row 2 | glucose | no | yes |
| row 3 | glycerol | no | no |
| row 4 | ALL fatty acids | yes | no |

- A** 1, 2 and 4 only
- B** 1, 2 and 3 only
- C** 1, 3 and 4 only
- D** 2, 3 and 4 only
- E** 1, 2, 3 and 4

24 Which of the following is/are tissues?

- 1** cartilage
- 2** skin
- 3** endothelium

- A** 1 and 3 only
- B** 1, 2 and 3
- C** 1 and 2 only
- D** 2 and 3 only
- E** 1 only

25 Which of the following statements about the metabolism of plants is/are correct?

- 1** CO₂ is produced during the day.
- 2** CO₂ is produced at night.
- 3** The CO₂ produced can be used by the plant.

- A** 1, 2 and 3
- B** 1 only
- C** 2 only
- D** 2 and 3 only
- E** 1 and 2 only

26 Which one of the following occurs during anaphase of mitosis in a healthy human liver cell?

- A** Sister chromatids are pulled by the spindle fibres towards opposite poles of the cell.
- B** Chromatin condenses so that the chromosomes are visible under the microscope.
- C** Chromosomes move towards the equator of the cell and attach to the spindle fibres.
- D** DNA replicates so that each chromosome is made up of two sister chromatids.
- E** Centrioles migrate to opposite poles of the cell and help to assemble the spindle fibres.