

April 2023 - Critical thinking test - FTA entry examination

6. 4. 2023

You have 30 minutes to fill this test. Deadline for completion of this test is till 11:30 a.m. CET (Prague time). Please don't forget to send/submit the test in time, later submission will be NOT possible, you will get 0 points!

Celkový počet bodů: 20

Oddíl 1

Your personal details

1

Your surname: *

Zadejte svoji odpověď.

2

Your first name(s): *

Zadejte svoji odpověď.

3

Your application number (Reg. No): *

Zadejte svoji odpověď.

4

Your email: *

Zadejte svoji odpověď.

5

Critical reading part:

Read the following passage and answer the questions 6 - 11 below based on what you read. Read the text and then choose the **best answer to each question. Answer all questions using **only** the information given in or implied.**

Sleep-deprived people may be more prone to false confessions

While the amount of sleep a person truly needs remains up for debate, the effects of not getting enough, both on the mind and the body, are clear to see. Sleep deprivation has been linked to a variety of conditions, including obesity, diabetes and depression. On top of that, a startling new study has shown that people who have been deprived of sleep are much more likely to sign a false confession than those who have had an undisturbed night of rest.

The study has obvious and perhaps worrying implications for police interrogation of crime suspects. In addition, it helps paint a more comprehensive picture of sleep deprivation's effects on brain function. "A number of studies have consistently found that there are dramatic changes in the brain with sleep deprivation," lead researcher Kimberly Fenn told IFLScience. "One of the strongest effects is a reduction in the activity of the frontal lobes, which are important for decision making."

False confessions – an innocent person admitting guilt – are a serious and complex subject. With interrogations often occurring during sleep hours, studies examining the effects this could be having on suspects are justified. For this particular study, Fenn and her colleagues recruited 88 volunteers and had them complete computer-based tasks during three laboratory sessions, spread over a week. Participants were monitored and repeatedly told not to press the escape button on the keyboard as that would cause them to lose all of their data. On the last night, half the participants slept for eight hours in lab bedrooms while the others were kept awake. "In the real world it's rare that people stay awake for a full night. However, it's common for people to get insufficient sleep over multiple nights. The important thing is that pretty much every physiological and cognitive effect seen after one night of sleep deprivation is also seen after a couple of nights of sleep restriction." Before participants were allowed to leave at the end of the study, they were given a form that summarized their activities and falsely accused them of hitting the escape key, which they were asked to confirm for accuracy and sign. Surprisingly, while only 18 percent of the well-rested participants signed the false allegation, it was signed by half of those who had been deprived of sleep the night before. When asked a second time, the figures bumped up to 39 and 68 percent, respectively.

Whether or not this study will have an impact on the criminal justice system remains to be seen. Nevertheless, in light of the findings, the authors recommend that assessments of sleepiness should be made before interrogations.

((<http://www.iflscience.com/brain/sleep-deprived-people-may-be-more-prone-false-confessions>).
Adapted from SCIO company)

Zadejte svoji odpověď.

6

According to the text, which of the following has not yet been determined? (počet bodů: 1)

- whether sleep deprivation affects the body
- how many hours of sleep people need ✓
- how many people suffer from sleep deprivation
- what may disturb a good night's rest
- whether there is a link between sleep deprivation and false
- confessions

7

What do the authors of the study suggest? (počet bodů: 1)

- That interrogations should be preceded by an evaluation of sleepiness. ✓
- That crime suspects should never be interrogated at night.
- That most people sent to prison are in fact innocent.
- That crime suspects should always take a nap before being interrogated.
- That a reform of the criminal justice system is inevitable.

8

When asked a second time, what percentage of the participants who were sleep deprived confirmed they had pressed the escape key in the course of the study? (počet bodů: 1)

- 18 percent
- 32 percent
- 39 percent
- 50 percent
- 68 percent ✓

9

Which of the following statements best summarizes the main purpose of Fenn's study?
(počet bodů: 1)

- The study tried to show that getting insufficient sleep for several nights has the same effects as staying awake for one full night.
- The study tried to determine the effects of sleep deprivation on the performance in computer-based tasks testing cognitive skills.
- The study tried to prove that sleep deprivation affects the activity in the frontal lobe and the ability to make decisions.
- The study tried to determine whether the likelihood of a false confession is related to the amount of sleep a person gets. ✓
- The study tried to show that most innocent people who are interrogated by the police are severely sleep deprived.

10

Which two of the following statements about Fenn's study are true?

- I. The participants were warned more than once against pressing the escape key.
 - II. The whole study took two weeks.
 - III. The participants didn't get enough sleep for several nights in a row.
 - IV. The accusation which the participants faced at the end of the study was unfounded.
- (počet bodů: 1)

- I and II
- I and III
- I and IV ✓
- II and III
- III and IV

11

Which two of the following consequences of sleep deprivation are mentioned in the text?

- I. Sleep deprivation lessens the risk of serious health problems, such as high blood pressure or stroke.
- II. Sleep deprivation affects the area in the brain which plays a vital role in decision making.
- III. Sleep deprivation affects the probability of a person being accused of a crime.
- IV. Sleep deprivation makes people more prone to confess to acts which they have not in fact committed. (počet bodů: 1)

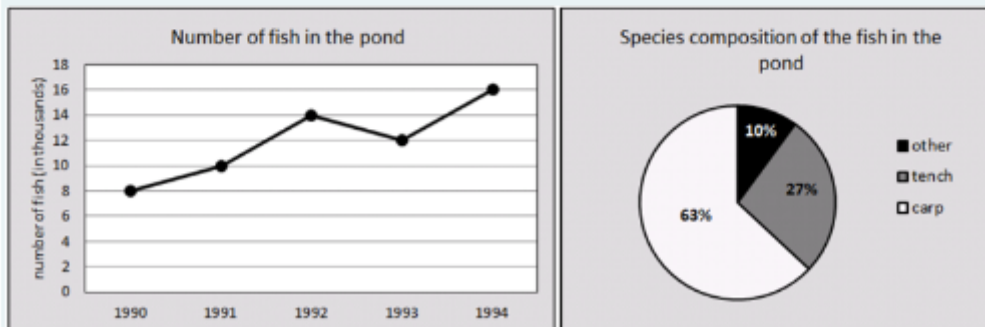
- I and II
- I and IV
- II and III
- II and IV ✓
- III and IV

12

Analytical part:

Read the following text and figures, and answer the questions 13 - 15 below based on what you read.

The line graph shows the total numbers of fish in the pond in 1990–1994, each year as of 30 June. The pie chart shows the species composition of the fish in the pond, which was identical for all the presented years.



Zadejte svoji odpověď.

13

By how many was the number of carp as of 30 June 1993 higher than that as of 30 June 1991? (počet bodů: 1)

- by 1,260 ✓
- by 2,000
- by 3,210
- by 3,320
- by 3,780

14

What was the average number of other fish in the pond as of 30 June in 1990–1994? (počet bodů: 1)

- 800
- 1,000
- 1,200 ✓
- 1,400
- 2,000

15

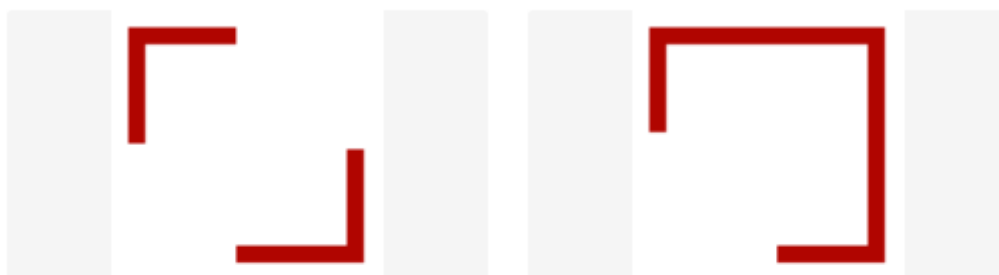
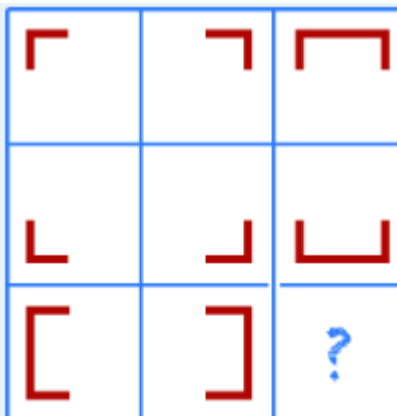
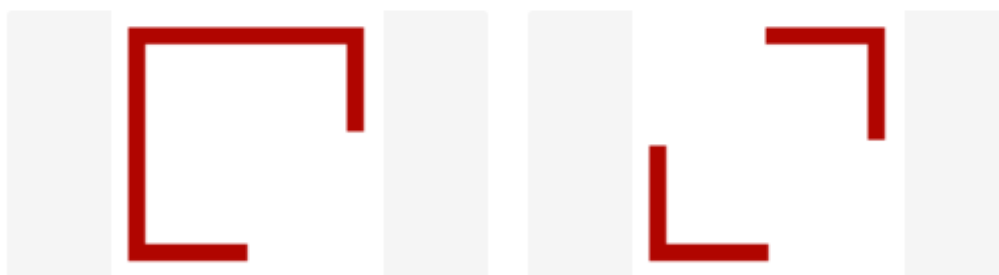
In total, how many tench were in the pond as of 30 June 1994? (počet bodů: 1)

- 3,800
- 3,960
- 4,205
- 4,320 ✓
- 4,477

16










Choose the correct form for the missing position:

(počet bodů: 1)

 Možnost 1 Možnost 2 Možnost 3 Možnost 4 Možnost 5 Možnost 6

17

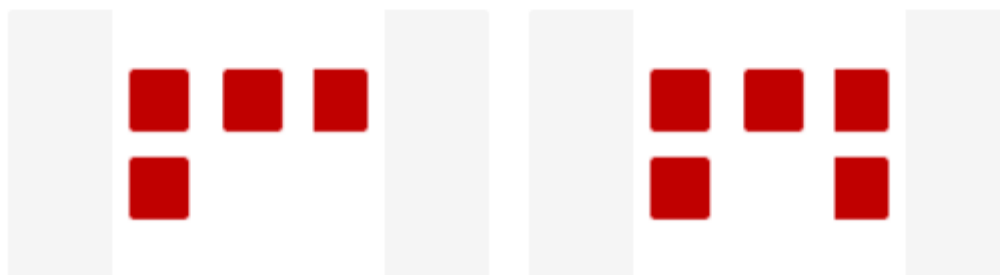
Choose the correct form for the missing position:
(počet bodů: 1)

| | | |
|---|--|---|
|  |  |  |
|  |  |  |
|  |  |  |


 Možnost 1

 Možnost 2

 Možnost 3

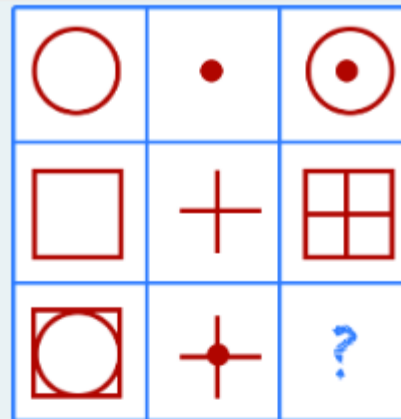
 Možnost 4

 Možnost 5

 Možnost 6

18

Choose the correct form for the missing position:

(počet bodů: 1)



Možnost 1



Možnost 2



Možnost 3



Možnost 4



Možnost 5



Možnost 6



19

Each of the four friends (Adam, Barney, Cecil, David) has a different partner (Mary, Nora, Olivia, Paula) and gave her a different flower (orchid, tulip, rose, aster) as a Valentine's Day gift. We know that:

- Paula is neither Barney's nor David's partner.
- Cecil's partner is either Mary or Olivia.
- Barney gave his partner an aster.
- Nora got a rose.

Which of the friends could have given his partner a tulip?
(počet bodů: 1)

- only Adam
- only Cecil
- only David
- only Adam or Cecil ✓
- Adam, Cecil or David

20

Each of the four friends (Adam, Barney, Cecil, David) has a different partner (Mary, Nora, Olivia, Paula) and gave her a different flower (orchid, tulip, rose, aster) as a Valentine's Day gift. We know that:

- Paula is neither Barney's nor David's partner.
- Cecil's partner is either Mary or Olivia.
- Barney gave his partner an aster.
- Nora got a rose.

Which of the girls can Adam have as his partner? (počet bodů: 1)

- only Mary
- only Olivia
- only Paula ✓
- Mary or Olivia
- Paula or Nora

21

The Czech Republic has more inhabitants than (more options are possible): (počet bodů: 1)

- Ukraine
- Switzerland ✓
- Italy
- Spain

22

The Czech Republic has a higher GDP/capita than (more options are possible): (počet bodů: 1)

- Belgium
- Italy
- India ✓
- Russia ✓

23

The idea that resources should be conserved so that people living today can meet their needs without limiting the ability of future generations to do the same is called: (počet bodů: 1)

- Globalization
- Environmental conservation
- Subsistence economics
- Sustainable development ✓

24

The currency in the Czech Republic is: (počet bodů: 1)

- Euro
- Franc
- Crown ✓
- Shilling

25

The Czech University of Life Sciences and the Faculty of Tropical AgriSciences is based: (počet bodů: 1)

- On the outskirts of Prague ✓
- In the centre of Prague
- On the outskirts of Brno
- In the centre of Brno

26

The official Czech language is from the same language group as (more options are possible): (počet bodů: 1)

- German language
- Austrian language
- Russian language ✓
- Is not similar to any Eastern Europe country's language