



Nacionalni centar  
za vanjsko vrednovanje  
obrazovanja

Идентификациона  
налепница

ПАЖЉИВО НАЛЕПИТИ

# ЕНГЛЕСКИ ЈЕЗИК

## ВИШИ НИВО

PROBNI ISPIT DRŽAVNE MATURE  
šk. god. 2022./2023.

ИСПИТ ЧИТАЊА  
(Reading Paper)

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Начин означавања одговора на листу за одговоре:

A	<input checked="" type="checkbox"/>	B	<input type="checkbox"/>	C	<input type="checkbox"/>
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Начин исправљања грешака на листу за одговоре:

A	<input checked="" type="checkbox"/>	B	<input type="checkbox"/>	C	<input checked="" type="checkbox"/>	C	<i>u2</i>
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Преписан тачан одговор

Параф (скраћени потпис)

## ОПШТА УПУТСТВА

Пажљиво прочитајте сва упутства и следите их.

Не okreћите страницу и не решавајте задатке док то не одобри водитељ испитне просторије.

Налепите идентификационе налепнице на све испитне материјале које сте добили у сигурносној кесици.

Испит читања траје **70** минута.

Испит се састоји од задатака повезивања, задатака вишеструког избора и комбинованих задатака допуњавања.

- У задацима повезивања **сваки** садржај означен бројем повежите **само с једним** одговарајућим садржајем који је означен словом (задатак 1).
- У задацима вишеструког избора од више понуђених одговора одаберите **само један** (задатак 2).
- У комбинованим задацима одаберите **само један** садржај који најбоље надопуњава текст (задачи 3, 4 и 5).

При решавању ових задатака можете писати по страницама ове испитне књижице.

**Одговоре морате означити знаком X на листу за одговоре.** Сваки тачан одговор доноси један бод.<sup>1</sup>

На 2. страници ове испитне књижице приказан је начин исправљања грешака.

Приликом исправљања погрешака потребно је ставити параф (искључиво скраћени потпис, а не пуно име и презиме).

Употребљавајте искључиво хемијску оловку која пише плавом или црном бојом.

Када решите задатке, проверите одговоре.

Желимо Вам много успеха!

<sup>1</sup> Бодови у свакој од три испитне целине имају одређени удео у коначном резултату.

Ова испитна књижица има 20 страница, од тога 3 празне.

## Task 1

### Questions 1-12

You are going to read an article in which people talk about hobbies.

For each question (1-12), choose one person from **A-F**.

Mark your answer on the answer sheet.

There is an example at the beginning (**0**→**B**).

## Hobbies

### A Andrew

My father was a pianist and I grew up listening to long and tedious concert rehearsals. He expected me to follow in his footsteps, but by the time I hit puberty I had got fed up with piano lessons and decided to try rapping in my free time. Although he found my attitude to music offensive and was repulsed by my somewhat vulgar lyrics, the unexpected ease with which I rhymed was truly amazing to both of us. Luckily, my sister was into her piano and loved classical pieces, which made my rebellion more bearable.

### B Becky

At the age of 17 I had a bad case of pneumonia and stayed in the hospital for weeks. As a very hyperactive person I quickly became frustrated by the lack of activity so one of the nurses showed me how to make some simple origami, hoping it would distract me from my idleness. Although it didn't come naturally to me, I fell in love with it instantly and got hooked for good. Later in life I used to spend hours folding paper at home with my own children in order to swap the origami for money with neighbours and donate to the local animal shelter.

### C Christian

I lost my wife to a serious illness last year. She was my companion and my best friend. I honestly thought life had completely become devoid of meaning. Then my daughter brought a leaflet advertising a ballroom dancing course for senior citizens and I realised how hard my depression was on her. She knew I'd give it a go, being physically active and fit. I've been enjoying it very much not only for the dancing – I had always had it in me – but also for the friendships which gave me a new sense of purpose.

### D Derek

One of my friends had been suffering from back pain and we realised that our sedentary lifestyle of staring at one screen or another was detrimental to our health. We took up Geocaching, an outdoor recreational activity, in which the participants use a GPS receiver to hide and seek containers called 'caches' at specific locations marked by coordinates. My mother doubted it at first, but now she loves the fact that my mates and I walk and cycle while talking much more than before.

**E Esther**

When I first started working as a secretary to the CEO of a multinational company, I didn't know how frequently I'd be sitting at my desk at 8 pm feeling physically drained, stressed out about pending tasks and desperate for a cigarette. On one of his business trips abroad, my boss learned about how beneficial Thai Chi can be for the overall productivity of employees and introduced an obligatory session, which takes place before lunch break and outdoors whenever the weather permits. I no longer need the gym membership, and I've even stopped smoking.

**F Flora**

I have been a bookworm since my early days. In adolescence, my love of reading kept me away from parties and nightclubs, which my parents appreciated as much as my top grades. I earned a master's degree in French at the age of 23 but didn't really have the passion for teaching or interpreting. Since I started my book blog there hasn't been a boring day in my life and, in addition to being quite well off, I now get free book samples from publishers who are eager to see a review of their latest edition on my website.

**Which person...**

**0 had difficulty staying in bed? → B**

- 1** was encouraged by a family member to do a hobby?
- 2** needed the activity to stave off boredom?
- 3** improved their social life?
- 4** was forced into taking up the hobby?
- 5** turned their hobby into a profitable business?
- 6** kicked an addiction?
- 7** decided to spend more free time in the open air?
- 8** discovered a talent?
- 9** used their hobby to contribute to society?
- 10** became mentally healthier?
- 11** did their hobby despite a parent's disapproval?
- 12** became more physically active?

## Task 2

### Questions 13-18

Read the text below.

For each question (13-18), choose the correct answer (A, B, C or D).

Mark your answer on the answer sheet.

### Reinforcement learning

Imagine a thought experiment in which you are sitting at a casino's poker table. Someone has explained the basic rules to you, but you've never played before and don't know even the simplest strategies. While on the one hand this might seem to be most people's idea of an anxiety-inducing situation, on the other it does not sound dissimilar to the beginning of a fairly typical training session for a certain kind of artificial intelligence (AI) program.

If an AI system found itself at the casino poker table, it would begin taking random actions within the rules – if playing five-card draw, for example, it would not ask for seven cards. When, eventually, and simply by virtue of dumb luck, it won a hand, it would take careful note of all the actions that led to that reward. Then, if it played the game for long enough, perhaps playing millions of hands, and accumulated a sufficient quantity of data, it could devise a good strategy for winning.

This type of training is known as reinforcement learning (RL), and it's the-state-of-the-art technology in machine learning today. RL can be used to teach agents, be they pieces of software or physical robots, how to act to achieve certain goals. And it has been responsible for some of the most impressive triumphs by artificial intelligence in recent years, such as the Google DeepMind Challenge Match in South Korea in 2016, not to be confused with the chess match between Deep Blue, an IBM supercomputer, and Gary Kasparov in 1997. In the former case, an RL computer program beat the 18-time world champion in the board game of Go.

RL differs from another approach called supervised learning, in which systems are trained using an existing labeled dataset. To continue the poker example: in a supervised-learning process, the AI player would get data about millions of hands. Each item of data would be labeled to describe how good or bad an action is for a given state of the game. This would allow the player to take good actions when it sees game states similar to those in the training data. This isn't a very practical way to train, since building a dataset with a massive number of possible game situations and actions is extremely difficult.

In contrast, RL offers a more effective way of training by allowing the agent to develop a dataset in real time during the training, which is more sophisticated than a labeled dataset. It proves a big advantage when dealing with real-world applications that don't come with lots of carefully organised observations. What's more, RL agents can learn strategies that enable them to act even in an uncertain and changing environment, taking their best guesses at the appropriate action when in a new situation.

One typical critique of RL is that it's inefficient, that it's just a glorified trial-and-error process that succeeds because of the mere computing power put to it. But researchers have been devising

efficient techniques that can exploit RL for practical breakthroughs. Their projects have been working on RL agents that can quickly figure out complex tasks and that can work together in teams, putting the group's overall objective ahead of their own individual goals. It is expected that in the near future, such methods will be tested on robots and other autonomous systems to bring these achievements into the real world.

- 13** Why does the writer introduce the thought experiment in the first paragraph?
- A** To draw a parallel with artificial intelligence.
  - B** To draw a parallel with artificial intelligence training.
  - C** To suggest a strategy for learning how to play poker.
  - D** To describe circumstances which would cause anxiety.
- 14** In the situation described in the thought experiment, an artificial intelligence system
- A** would only win on account of pure luck.
  - B** would start by not playing according to the rules.
  - C** would continue playing the game millions of times.
  - D** would accumulate information about winning hands.
- 15** Reinforcement learning
- A** was developed in South Korea in 2016.
  - B** is at the cutting edge of modern technology.
  - C** defeated Gary Kasparov in a game of chess.
  - D** is used to teach secret agents how to reach their goals.
- 16** Supervised learning systems
- A** are similar to reinforcement learning systems.
  - B** allow poker players to assess training data.
  - C** are difficult to train to build a dataset.
  - D** evaluate data by labeling it.

**17** Reinforcement learning is superior to supervised learning because

- A** it generates a superior dataset.
- B** it is based on careful observation.
- C** it is based on a larger quantity of data.
- D** it enables certainty in changing situations.

**18** Experts researching reinforcement learning

- A** rely on a trial-and-error process.
- B** are testing their methods on robots.
- C** owe their success to computer power.
- D** are developing agents which are team-players.



**Task 3**

**Questions 19-24**

Read the text on the next page.

For each question (**19-24**), choose the sentence (**A-H**) that best fits the gap.

There are **two** sentences that you do **not** need.

Mark your answer on the answer sheet.

There is an example at the beginning (**0→I**).

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### The tyranny of passwords

Modern life is the act of entering the name of a long-dead family pet into an online form over and over again, getting it wrong, and trying to figure out what the correct password might be. Our ancestors lived short, brutish lives and were gored to death on the battlefield. (0) \_\_\_\_.

Passwords deny us access to our bank accounts, our photos, our contracts, even our heating. These petty dictators reproduce as endlessly as bacteria. And yet, you can never find the one you need. (19) \_\_\_\_\_. Easy to crack and hard to remember. And forgetting them is pricey.

We lose things; we forget. It is in our nature, it's what makes us human. Most of all, we forget our passwords. In fact, the average person has close to 80 passwords, hardly any of which they remember. Not being able to remember your password is merely irritating. (20) \_\_\_\_\_. Like in the case of German programmer Stefan Thomas who lost the password to around \$220m worth of bitcoin. He had three copies of his bitcoin passwords saved on hard drives and a USB stick, but the first two versions failed due to software updates, and the USB stick is password protected. If Thomas enters the password incorrectly 10 times, the data wipes. He has two attempts left, and he can't remember the password.

The best password is a random password. But people aren't good at generating random passwords or remembering them. They think they are being smart in creating them. (21) \_\_\_\_\_. Our passwords reveal a humanity that is much more shared than we can imagine. We all think alike, we all do similar things. And it's in all the hacker dictionaries.

There are literally billions of password breaches every year. (22) \_\_\_\_\_. The World Economic Forum estimates that cybercrime costs the global economy \$2.9m every minute. Around 80% of those attacks are password-related.

There is a solution to all this chaos and confusion: a password manager. These are apps or small pieces of software. They store all your different usernames and passwords in secure vaults. A password manager will randomly generate impenetrable passwords for all your various accounts, and store them for you. (23) \_\_\_\_\_. And the password manager remembers the rest. It's the equivalent of having a book in your house, with all your passwords written in it – only digital and highly secure.

Wouldn't it be even better to never have to remember another password again? Well, that day is near. (24) \_\_\_\_\_. The solution is biometrics. An Israeli start-up has developed software that can analyse the unique way a person drags their mouse, and use it to catch cybercriminals impersonating users. Other firms are developing technology based on the unique contours of a person's ears. We will have a constellation of biometrics, not just your fingerprint, but your voice or how you hold your phone.

The tyranny of passwords is coming to an end. For the ordinary consumers, passwords will be gone within the next two to five years, so we may soon move seamlessly through life unburdened by passwords. Until that day – access denied.

- A** Sometimes, however, password amnesia can be life-altering.
- B** It's highly likely that a hacker will get access to them.
- C** We're on the brink of a passwordless world.
- D** However, almost everything you intuitively believe about passwords is not correct.
- E** They are infuriating gatekeepers that rule our lives on a daily basis.
- F** It's a total epidemic.
- G** Those passwords are tedious and humans need to give up on them.
- H** All users need to do is memorise their master password.
- I** **But at least they didn't have passwords.**

## Task 4

### Questions 25-32

Read the text below.

For each question (25-32), choose the answer (A, B, C or D) that best completes the sentence.

Mark your answer on the answer sheet.

There is an example at the beginning (0→A).

### The Cajon

The cajon has been, since the 19th century, a key component in traditional Afro-Peruvian music. Named (0) \_\_\_\_ the Spanish word for “box”, the cajon was first invented to replace the African drums used by slaves in colonial Peru, (25) \_\_\_\_ were eventually banned by the slaves’ masters. The first examples of the cajon were extremely simple, consisting merely of empty wooden fruit crates or even upside-down drawers – anything that (26) \_\_\_\_ be harnessed to the rhythm of the music.

If the cajon’s contemporary popularity can be (27) \_\_\_\_ to any single musician, it would undoubtedly be Paco de Lucia, the famed master of the flamenco guitar. He attended a party in his honour thrown at Spain’s embassy in Lima in the early 1970s. This celebration featured the musical stylings of a local folk band, (28) \_\_\_\_ instrumentation included the cajon. The instrument’s bold sound naturally appealed (29) \_\_\_\_ Paco; the flamenco style includes multiple rhythms and typically calls for the guitarist to beat on the body of his instrument in addition to playing it normally. He (30) \_\_\_\_ captivated by the cajon and asked his percussionist to try using it to play the traditional flamenco rhythm. The results were so (31) \_\_\_\_ that de Lucia took a cajon with him when he returned to Spain. The cajon’s sound is ideal for short, staccato rhythms like those used in flamenco with its stamping (32) \_\_\_\_ and clapping. Coming to Spain was the cajon’s first step on a journey towards worldwide popularity.

0

- A after
- B with
- C by
- D as

**25**

- A** which
- B** that
- C** who
- D** what

**26**

- A** will
- B** can
- C** could
- D** may

**27**

- A** signed
- B** asserted
- C** ascertained
- D** assigned

**28**

- A** whom
- B** whose
- C** who's
- D** which

**29**

- A** with
- B** to
- C** by
- D** for

30

- A was
- B were
- C has been
- D had been

31

- A unimpressed
- B unimpressive
- C impressive
- D impressing

32

- A patchwork
- B clockwork
- C footprints
- D footwork

**Task 5****Questions 33-40**

Read the text on the next page.

For each question (**33-40**), choose the answer (**A-K**) that best completes the sentence.

There are **three** options that you do **not** need.

Mark your answer on the answer sheet.

There is an example at the beginning (**0→L**).

## The Post-Truth Society

Our society appears to be experiencing a period (0) \_\_\_\_\_ truth, norms, rules and traditions cannot be relied on in order for us to make decisions about our future. Some people call (33) \_\_\_\_\_ the post-truth society.

What are the causes of this fundamental change in our information culture? Experts say that 'datafication' (which means our lives (34) \_\_\_\_\_ more and more digital), mass surveillance (which means less privacy), and social media are (35) \_\_\_\_\_ blame. As well as an increasing (36) \_\_\_\_\_ to look to emotion, rather than reason.

Truth does matter – without it we are exposed to chaos. The most powerful counter to the post-truth society is to have educated, engaged and well-informed citizens, (37) \_\_\_\_\_ refuse to allow themselves to be deceived by disinformation, most of which comes from 'interested parties' (entrepreneurs, corporations, institutions, governments) who can gain a benefit from the (38) \_\_\_\_\_ of trust in consensual, factual truth.

Experts also say that these times call for unbiased and current knowledge that (39) \_\_\_\_\_ inform action – particularly from people working in sectors that are responsible for the post-truth society, such as 'big tech' executives, social media operatives, journalists and politicians.

All agree that learning and education must play a major role in (40) \_\_\_\_\_ workable solutions to address the challenges of the post-truth society.



- A** may
- B** them
- C** there
- D** finding
- E** lack
- F** tendency
- G** who
- H** what
- I** becoming
- J** this
- K** to
- L** **when**

Празна страница

Празна страница

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