

LUCRARE SCRISĂ LA LIMBA STRĂINĂ – ENGLEZĂ
VARIANTA I

A. Partea I: CITIT
(Citirea cu atenție)

Choose the correct answer a, b, c, or d.

The United States Air Force Academy (also known as USAFA, the Air Force Academy, or the Academy), is a military academy for officer cadets of the United States Air Force. Its campus is located in the western United States in Colorado, immediately north of Colorado Springs in El Paso County.

The Academy's stated mission is "to educate, train, and inspire men and women to become leaders of character, motivated to lead the United States Air Force in service to our nation." It is the youngest of the five U.S. service academies, having graduated its first class 59 years ago in 1959; however it is the third in seniority. Graduates of the Academy's four-year program receive a Bachelor of Science degree, and are commissioned as second lieutenants in the U.S. Air Force. The Academy is also one of the largest tourist attractions in Colorado, attracting approximately a million visitors each year.

1. The text informs us that USAFA ...

a	is located in a country called Colorado Springs.
b	trains military officers.
c	lies west of Colorado.
d	trains military cadets to become air force officers.

2. We further learn from this passage that...

a	the academy acknowledged mission relates to education, training and forming leaders.
b	the academy has a stated mission that refers to receiving men and women to work in the United States Air Force.
c	the academy is senior among the other five US academies.
d	the academy was founded 59 years ago.

People often ask which is the most difficult language to learn, and it is not easy to answer because there are many factors to take into consideration. Firstly, in a first language the differences are unimportant as people learn their mother tongue naturally, so the question of how hard a language is to learn is only relevant when learning a second language.

A native speaker of Spanish, for example, will find Portuguese much easier to learn than a native speaker of Chinese, for example, because Portuguese is very similar to Spanish, while Chinese is very different, so first language can affect learning a second language. The greater the differences between the second language and our first, the harder it will be for most people to learn. Many people answer that Chinese is the hardest language to learn, possibly influenced by the thought of learning the Chinese writing system, and the pronunciation of Chinese does appear to be very difficult for many foreign learners. However, for Japanese speakers, who already use Chinese characters in their own language, learning writing will be less difficult than for speakers of languages using the Roman alphabet.

3. The text informs us that...

a	people's first language has unimportant differences from their mother tongue.
b	people's first language is learnt taking many factors into consideration.
c	people's mother tongue is not difficult to learn because the process is natural.
d	people's second language is learnt only because it is relevant as a hard language.

4. Based on the text, we find out that ...

a	people can be affected by learning Chinese because Spanish is very similar to Portuguese.
b	people can learn a difficult language no matter if it is Chinese or Portuguese.
c	people will learn a second language more easily if it does not differ much from their own.
d	people cannot learn Portuguese if their first language is not Chinese.

5. We learn from the passage that ...

a	second languages using the Roman alphabet may be learnt easily if their pronunciation is easy.
b	a different writing system in the new language can make it very difficult to learn.
c	people using the Chinese writing system cannot pronounce the second language easily.
d	Chinese and Japanese will be less difficult to learn if they are written in the Roman alphabet.

(Citirea selectivă)

The Apollo program was the third United States human spaceflight program carried out by the NASA, which accomplished landing the first humans on the Moon from 1969 to 1972. Imagined as a three-man spacecraft to follow the one-man Project Mercury which put the first Americans in space, Apollo was later dedicated to President John F. Kennedy's national goal of "landing a man on the Moon and returning him safely to the Earth". It was the third US human spaceflight program to fly, preceded by the two-man Project Gemini designed in 1961 to extend spaceflight capability in support of Apollo.

Kennedy's goal was accomplished on the Apollo 11 mission when astronauts Neil Armstrong and Buzz Aldrin landed their Lunar Module on July 20, 1969, and walked on the lunar surface, while Michael Collins remained in lunar orbit in the Command/Service Module, and all three landed safely on Earth on July 24. Five subsequent Apollo missions also landed astronauts on the Moon, the last in December 1972. In these six spaceflights, twelve men walked on the Moon.

6. Based on the passage, men walked on the Moon

a	since 1961.
b	in 1961.
c	for about eleven years.
d	for only three years.

7. The passage informs us that the Apollo program was dedicated to ...

a	a chief of state.
b	Project Mercury.
c	the NASA.
d	Project Gemini.

8. We learn from the text that during Apollo 11 mission ... walked on the Moon.

a	two astronauts
b	three astronauts
c	six astronauts
d	twelve astronauts

The first Starbucks opened in Seattle, Washington, on March 31, 1971, by three partners who met while they were students at the University of San Francisco: English teacher Jerry Baldwin, history teacher Zev Siegl, and writer Gordon Bowker were inspired to sell high-quality coffee by

coffee entrepreneur Alfred Peet after he taught them his style of roasting beans. The company took the name of the chief mate in the book *Moby-Dick*: Starbuck, after considering "Cargo House" and "Pequod".

The first Starbucks store was located in Seattle at 2000 Western Avenue from 1971–1976. This cafe was later moved to 1912 Pike Place, never to be relocated again. During this time, the company only sold roasted whole coffee beans and did not yet brew coffee to sell. The only brewed coffee served in the store were free samples. During their first year of operation, they purchased green coffee beans from Peet's, then began buying directly from growers.

9. Based on the text, the founders of Starbucks went to a school ...

a	in Washington.
b	from 1971 to 1976.
c	in San Francisco.
d	of business administration.

10. The text informs us that another business man had instructed the Starbucks owners how to ...

a	brew coffee beans.
b	roast coffee beans.
c	purchase coffee beans.
d	grow coffee beans.

11. Based on the text, after five years, the coffee store ...

a	was reconsidered.
b	was renamed.
c	was purchased.
d	was relocated.

12. We learn from the passage that, in their first years, the owner of Starbucks only...

a	imported brewed coffee.
b	sold coffee beans.
c	bought Peet's roasted coffee.
d	sold coffee to growers.

The Smithsonian Institution, established on August 10, 1846 "for the increase and diffusion of knowledge", is a group of museums and research centers administered by the Government of the United States. The institution is named after its founding donor, British scientist James Smithson. Originally organized as the "United States National Museum," that name ceased to exist as an administrative entity in 1967.

Termed "the nation's attic" for its eclectic holdings of 154 million items, the Institution's nineteen museums, nine research centers, and zoo include historical and architectural landmarks, mostly located in the District of Columbia. Additional facilities are located in Arizona, Maryland, Massachusetts, New York City, Pittsburgh, Texas, Virginia, and Panama. More than 200 institutions and museums in 45 states, Puerto Rico, and Panama are Smithsonian Affiliates.

The Institution's thirty million annual visitors are admitted without charge. Its annual budget is around \$1.2 billion with 2/3 coming from annual federal appropriations. Other funding comes from the Institution's endowment, private and corporate contributions, membership dues, and earned retail, concession, and licensing revenue.

13. Based on the text, the initial name of the Smithsonian Institution was ...

a	U.S National Museum.
b	James Smithson.
c	Smithsonian Affiliates.
d	The Nation's Attic.

14. We learn from the passage that a good number of the Institution's museums are located in ...

a	Puerto Rico and Panama.
b	forty-five states.
c	outside the United States.
d	District of Columbia.

15. The text informs us that the annual resources of the Institution are estimated to ...

a	two-thirds of the U.S. budget.
b	one hundred fifty-five million dollars.
c	more than one billion dollars.
d	thirty million dollars.

B. Partea a II – a: ELEMENTE DE GRAMATICĂ ȘI VOCABULAR
(Gramatică)

Choose one correct answer a, b, c or d:

16. The lecturer will begin his conference when everybody...seated.

a	will be
b	is
c	are
d	shall be

17. Three people lost their...in this car accident.

a	lifes
b	lives
c	life
d	living

18. I don't know, and that's ... truth.

a	the
b	a
c	an
d	-

19. I need...pieces of information.

a	father
b	farther
c	further
d	farer

20. The innkeeper...offered them shelter.

a	kinderly
b	kind
c	kinder
d	kindly

21. Do you think I...send her another letter?

a	might have
b	ought
c	ought to
d	could have

22. I don't know if he...to the party.

a	come
b	will come
c	has been coming
d	will coming

23. We couldn't live if... for the oxygen in the air.

a	there isn't
b	it weren't
c	there aren't
d	it has been

24. She never smiles and looks quite...

a	miserable
b	eagerly
c	paternal
d	unfortunately

25. In my opinion, his situation is similar...mine.

a	of
b	off
c	to
d	from

(Vocabulary)

26. He knows so much! And he ... it all from his teachers.

a	taught
b	learned
c	thought
d	tough

27. He will answer. And don't worry: in case he doesn't, you can ... call his private number.

a	style
b	steel
c	steal
d	still

28. He hurt his elbow during the match. This is why he can't move his...

a	foot
b	leg
c	shin
d	arm

29. This expression is not ... for use in civilized conversation.

a	usable
b	fittable
c	suitable
d	conversable

30. A hotel is an establishment providing paid ...

a	accommodation.
b	commodities.
c	hospitable.
d	dormitories.

31. He is not happy with his room: he wants the bridal ..., no less.

a	suit
b	suite
c	sweet
d	gown

32. ... generally dislike violence, even when it seems justified.

a	Personas
b	Humanoids
c	Humanities
d	People

33. So I went to the ... to buy some of those exotic ingredients for my soup.

a	store
b	magazine
c	storey
d	stage

34. He wasn't sorry about it back then. But ..., when tables have turned, he regrets it.

a	now
b	none
c	present
d	nowaday

35. Her brother-in-law is not easy to live with. He is a very ... person.

a	defectively
b	deficient
c	difficult
d	difficultly

B. Partea a III-a: SCRIS

36. Choose the most appropriate greeting to start a formal letter (the recipient's full name is Mary Taylor):

a	Madame Mary Taylor,
b	Dear Ms. Taylor,
c	Hi Mr. Taylor,
d	Mr. Taylor,

37. Which of the following sentences is inappropriate in a letter of application?

a	I hope my education recommends me for the position.
b	I hope my skills will fully meet your requirements.
c	As shown, I have extensive experience in the field.
d	You really seem to need my skills and competence.

38. Choose the most appropriate way to express complaint in a formal letter:

a	I am writing to express my dissatisfaction: you forgot about me! What's up to you?
b	I'm very angry: my product hasn't arrived yet. Are you trying to trick me?
c	My product hasn't arrived yet. If it's not here by tomorrow, I will sue you.
d	I am sorry to inform you that the product I ordered last week has not arrived yet.

39. Which is the most logical sentence?

a	I did not attend last night's game because I like ice hockey.
b	If I did not like ice hockey, I attended last night's game.
c	I hate ice hockey, so I did not attend last night's game.
d	If I had not attended last night's game, so I hated ice hockey.

40. Choose the most appropriate line to make a formal invitation:

a	Think you can make it tonight to our main event?
b	Would you consider joining us for our event tonight?
c	Join us for the event, will you? We'll have some fun.
d	Please, join us tonight! We like to spend the night with you!

41. Which is the correct narration?

a	He told me he was going to be late and I suddenly felt sorry to leave.
b	He told me he is going to be late and I suddenly felt sorry to leave.
c	He told me he was going to be late and I suddenly fell sorry to leave.
d	He told me he is going to be late and I suddenly feel sorry to leave.

42. How would you complete the following sentence to avoid spelling and grammar mistakes: "You don't have to..."

a	proove anything, the answer is simply to obvious: you're not a loser!"
b	loose your temper: just chose the right answer."
c	buy this tight jacket: you can choose one that is looser."
d	proof that it doesn't fit: the jacket is simply too tigh!"

43. Which is the most appropriate line to end a formal letter?

a	Yours sincerely,
b	Yours forever,
c	Thank you,
d	Lots of sympathy,

44. Choose the most polite way to decline a formal invitation:

a	Thank you very much for your invitation, but I am afraid I will be unable to attend.
b	Great, see you there! I can't wait to get together with you and you other guests!
c	Thanks for the invitation, but I already have other plans for the evening.
d	Thanks for your invitation, but no, thanks. I'm too busy already.

45. Choose the most appropriate way to start a collective 'thank you' letter to your friends:

a	Guys, I must say my advice was completely useless. I give my apologies.
b	Dear friends, Your disregard concerning our financial issue was indeed precious.
c	Guys, Can you help me? I'll be forever thankful.
d	Dear friends, What you did for us is unforgettable, we really appreciate it!

**BAREM DE EVALUARE ȘI APRECIERE A
TESTULUI GRILĂ LA ENGLEZĂ
VARIANTA I**

1	d	16	b	31	b
2	a	17	b	32	d
3	c	18	a	33	a
4	c	19	c	34	a
5	b	20	d	35	c
6	d	21	c	36	b
7	a	22	b	37	d
8	a	23	b	38	d
9	c	24	a	39	c
10	b	25	c	40	b
11	d	26	b	41	a
12	b	27	d	42	c
13	a	28	d	43	a
14	d	29	c	44	a
15	c	30	a	45	d

LUCRARE SCRISĂ LA MATEMATICĂ
VARIANTA I A

1. Mulțimea soluțiilor ecuației $(2 + \sqrt{3})^x + (2 - \sqrt{3})^x = 14$ este
a) $\{-3, 3\}$; **b)** $\{-1, 1\}$; **c)** $\{-2, 2\}$; **d)** Φ ; **e)** $\left\{-\frac{1}{2}, \frac{1}{2}\right\}$.
2. Fie $\vec{a} = \frac{\sqrt{3}}{2}\vec{i} + \frac{1}{2}\vec{j}$ și $\vec{b} = \sqrt{3}\vec{i} - \vec{j}$. Notăm cu $\alpha = \angle(\vec{a}, \vec{b})$ unghiul dintre vectorii \vec{a} și \vec{b} , iar $x = \vec{a} \cdot \vec{b}$. Atunci:
a) $\alpha = \frac{\pi}{3}$, $x = 1$; **b)** $\alpha = \frac{\pi}{6}$, $x = 1$; **c)** $\alpha = \frac{\pi}{4}$, $x = 0$; **d)** $\alpha = \frac{\pi}{2}$, $x = 2$; **e)** $\alpha = \frac{2\pi}{3}$, $x = 0$.
3. Expresia $E = 8 \cdot \cos \frac{x}{2} \cdot \cos \frac{x}{4} \cdot \cos \frac{x}{8}$, este egală cu:
a) $E = \frac{\cos x}{\cos \frac{x}{8}}$; **b)** $E = \frac{\sin \frac{x}{2}}{\sin \frac{x}{8}}$; **c)** $E = \frac{\sin x}{\sin \frac{x}{2}}$; **d)** $E = \frac{\sin x}{\sin \frac{x}{8}}$; **e)** $E = \frac{\cos x}{\cos \frac{x}{2}}$.
4. Într-o progresie geometrică $(b_n)_{n \geq 1}$ notăm $P_n = \prod_{k=1}^n b_k$. Dacă $P_{40} = P_{60}$, atunci P_{100} este :
a) 1; **b)** 40; **c)** 60; **d)** 50; **e)** 100.
5. Să se calculeze $A = \lg \frac{1}{2} + \lg \frac{2}{3} + \lg \frac{3}{4} + \dots + \lg \frac{99}{100}$.
a) $A = \sqrt{2}$; **b)** $A = -2$; **c)** $A = 3$; **d)** $A = 10$; **e)** $A = 4$.
6. Să se determine valoarea expresiei $E = x^{333} + \frac{1}{x^{333}}$, știind că x satisface ecuația $x + \frac{1}{x} = -1$.
a) $E = i$; **b)** $E = 1$; **c)** $E = -3$; **d)** $E = 2$; **e)** $E = 2i$.
7. Se consideră matricea $A = \begin{pmatrix} 1 & a+1 & a-2 \\ 3a & a+1 & -2 \\ 2a+3 & 1 & -3 \end{pmatrix}$. Să se determine $a \in \mathbf{R}$ pentru care $A^{-1} = A^*$, unde A^{-1} este inversa matricei A , iar A^* este adjuncta matricei A .
a) $a \in \left\{-8, \frac{5 \pm \sqrt{41}}{4}\right\}$; **b)** $a \in \left\{2, \frac{5 \pm \sqrt{41}}{2}\right\}$; **c)** $a \in \left\{1, \frac{5 \pm \sqrt{41}}{4}\right\}$; **d)** $a \in \Phi$; **e)** $a \in \left\{0, \frac{5}{4}\right\}$.
8. Numărul termenilor iraționali din dezvoltarea $(\sqrt[3]{12} - 3\sqrt[6]{6})^9$ este:
a) 20; **b)** 0; **c)** 1; **d)** 18; **e)** 19.
9. Dacă $z_1 + z_2 = 3 + 2i$ și $2z_1 - \bar{z}_2 = 3 + 3i$, unde $i^2 = -1$ și \bar{z}_2 conjugatul numărului complex z_2 , atunci:
a) $|z_1| = 1$; **b)** $z_1 \cdot z_2 \in \mathbf{R}$; **c)** $z_1^2 + z_2^2 = 1$; **d)** $z_1 - z_2 \in \mathbf{N}$; **e)** $|z_2| = 1$.
10. Să se calculeze $\lim_{n \rightarrow \infty} \left[\lim_{x \rightarrow 0} (\cos x \cdot \cos 2x \cdot \dots \cdot \cos nx) \frac{1}{n^3 x^2} \right]$.
a) e^3 ; **b)** e^{-2} ; **c)** $e^{\frac{1}{3}}$; **d)** $e^{\frac{1}{2}}$; **e)** $e^{-\frac{1}{6}}$.
11. Se consideră funcția $f: (0, \infty) \rightarrow \mathbf{R}$, $f(x) = x \cdot \ln^2 x$. Fie m și M minimul, respectiv maximul local al funcției f . Atunci $\alpha = |m + M|$ este :
a) $\alpha = \frac{1}{e}$; **b)** $\alpha = \frac{4}{e^2}$; **c)** $\alpha = 2$; **d)** $\alpha = \frac{1}{e^2}$; **e)** $\alpha = \frac{2}{e}$.

12. Să considerăm funcția $f: \mathbf{R} \rightarrow \mathbf{R}$, $f(x) = \sqrt{|1-x^2|}$. Dreapta de ecuație $y = mx + n$ este asimptotă oblică a graficului funcției f spre $-\infty$. Atunci suma $m + n$ are valoarea:
a) $+\infty$; **b)** -2 ; **c)** 0 ; **d)** 1 ; **e)** -1 .
13. Într-un reper cartezian xOy se consideră punctele $A(2, 4)$, $B(-1, 2)$ și $C(4, 1)$. Ecuația dreptei duse prin punctul A , paralelă cu BC este:
a) $x + 5y = 0$; **b)** $x + y - 2 = 0$; **c)** $x + 5y - 22 = 0$; **d)** $2x + 5y - 22 = 0$; **e)** $x + 5y - 20 = 0$.
14. Dacă $\int_0^{\frac{\pi}{2}} \frac{1 + \sin x}{1 + \cos x} \cdot e^x dx = e^k$, atunci:
a) $k = \frac{\pi}{2}$; **b)** $k = 1$; **c)** $k = 2$; **d)** $k = \pi$; **e)** $k = 0$.
15. Pentru ce valoare a parametrului $a > 0$, aria delimitată de curba $y = \frac{x}{6} + \frac{1}{x^2}$, axa Ox și dreptele $x = a$, $x = 2a$, are cea mai mică valoare?
a) $a = 7$; **b)** $a = 2$; **c)** $a = 3$; **d)** $a = 5$; **e)** $a = 1$.

**BAREM DE EVALUARE ȘI APRECIERE A
TESTULUI GRILĂ LA MATEMATICĂ
VARIANTA I A**

1	c
2	a
3	d
4	a
5	b
6	d
7	c
8	a
9	d
10	e
11	b
12	e
13	c
14	a
15	e