

**VARIANTĂ DE SUBIECT LA PROGRAMUL DE STUDII
UNIVERSITARE DE LICENȚĂ, SPECIALIZAREA „LOGISTICĂ”**

A. PROBA 1 – LIMBA ENGLEZĂ

PART I: READING COMPREHENSION

For items 1 through 15, choose the one correct answer a, b, c, or d:

I. This is an e-mail from one friend to another.

Hi, Jeff,

How was your weekend? Hopefully, it was better than mine was. You warned me, but I just wouldn't listen. Peter kept saying "Skiing is easy – nothing to it", so I took his word for it.

The drive to the ski resort was great. But when we got there, I quickly found out that skiing for the whole weekend was going to cost a lot more than I'd expected. I'd budgeted enough for a hotel room and food and all that, but the two-day ski pass plus renting all the ski equipment was a lot more expensive than I'd imagined.

After spending all that money on renting equipment, I really wanted to go out and ski and I didn't want to start on the easy slopes with all the kids. Of course, you were right when you said that's where I belonged. I should've taken your advice. Well, I found out the hard way that there's a lot to learn.

I started out okay: I managed to get on the chair lift. Peter was sitting next to me and told me what to do – keep the ski tips up, etc. But the closer we got to the top of the slope, the more scared I got, as I knew that the ride would end. Well, needless to say, I almost caused an accident getting off the chair lift!

Skiing down the slope was even worse. I won't go into details, but I did all the things I wasn't supposed to do and made basic mistakes. I kept falling all over the place. Other skiers had to make an effort to avoid me because I couldn't get out of the way.

I was so sore after one run – basically falling the whole way down the mountain – that I spent the rest of the first day, and all of the next, sitting next to the fire, drinking hot chocolate, waiting for the weekend to end. I'm just thankful I didn't break any bones. While I don't regret going, there's no more skiing for me.

I hope you're doing well.

Elaine

1. What surprised Elaine?
 - a. the cost of skiing
 - b. the dangers of skiing
 - c. how far away the ski resort was
 - d. how beautiful the ski resort was

2. What did Jeff advise Elaine to do?
 - a. get a two-day ski pass
 - b. bring her own ski equipment
 - c. start on the beginner slopes
 - d. keep her ski tips up on the chair lift
3. What does Elaine imply about Peter?

- a. He was helpful.
- b. He is a good listener.
- c. He had an accident.
- d. He had never skied before.

4. What was Elaine afraid of?

- a. injuring herself
- b. damaging her skis
- c. causing an accident
- d. getting off the chair lift

5. How did Elaine probably feel at the end of the weekend?

- a. upset with Peter
- b. glad it was all over
- c. sad she had to leave
- d. embarrassed by her mistakes

II. With the beginning of the winter season, man's natural enemies, the common cold and the flu, arrive with full force. It seems that the fluctuations in temperature and weather are guarantees that coughs and sneezes will spread infecting germs among family and friends.

More than 100 different types of bacteria can cause a cold, and doctors sometimes use antibiotics to treat bacterial colds. However, there are an equal number of viruses that can cause influenza, and modern science offers no drug capable of curing viral infections of that type. In most cases, the best advice is the usual prescription: get plenty of rest, drink a lot of warm fluids, and be prepared to suffer for three to ten days.

Some home cures help to relieve the symptoms of colds and flus. Mother's chicken soup, rich in fats and oils, helps to revitalize a tired body and to calm a sore throat. Garlic, containing the active ingredient *allicin*, has long been used to fight off the effects of bacteria and viruses. Hot drinks consisting of small amounts of liquor mixed with honey, sugar and lemon juice can relieve pain and draw out cold germs. Finally, recent evidence suggests that large doses of vitamin C not only stimulate the immune system before a cold arrives, but also relieve cold symptoms after they have set in.

6. What is the topic of this fragment?

- a. Man's natural enemies
- b. The nature of colds and flu
- c. Fluctuations in temperature
- d. The onset of winter

7. It can be understood from the passage that antibiotics

- a. have been on the market for a long time.
- b. are not yet effective on bacterial colds.
- c. may kill beneficial organisms.
- d. cannot be used to treat influenza.

8. According to the passage, most cases of flu

- a. are intensified by drinking too many fluids.
- b. are not caused by a lack of rest.
- c. last several days.
- d. result in excessive suffering.

9. According to the passage, which of the following is NOT an ingredient of a hot drink?

- a. garlic
- b. liquor
- c. lemon juice

d. honey

10. In the last line of paragraph 3 the author uses the phrase ‘stimulate the immune system’ to suggest that vitamin C

- a. is a recently discovered remedy.
- b. helps to fight off colds.
- c. contains the active ingredient *allicin*.
- d. helps only in a few cases.

III. The Golden Age of Railways refers to the period from the end of the Civil War to the beginning of World War I when railways developed and, in fact, maintained a near monopoly in mass transportation in the United States. One of the significant developments during the period was the considerable increase in uniformity, particularly through standardization.

At the end of the Civil War, only about half of the nation’s railways were laid at 1.4 meters; much of the rest, particularly in the southern states, had 1.5. During the postwar years, railways were converted to 1.4, and by June 1, 1886, the standardization of railways was completed, resulting in increased efficiency and economy in the railway system.

Another improvement to railway efficiency was the implementation of standard time in 1883. With the adoption of standard time, four time zones were established across the country, simplifying railway scheduling and improving the efficiency of railway service.

11. Which of the following occurred as a result of uniformity of railways?

- a. The Civil War
- b. Improved economy in the transportation system
- c. Standardization of time zones
- d. Quality of transportation

12. The passage indicates that standard time was implemented

- a. Before the Civil War
- b. On June 1, 1886
- c. After World War I
- d. Before the standardization of railways

13. The Golden Age of Railways

- a. was a result of World War I
- b. was a period when most of US mass transportation system was controlled by the railways
- c. resulted in less uniformity of railways
- d. resulted in standardization of train stations

IV. For several decades, psychologists have been doing extensive research on a subject that affects millions of us: hobbies. According to their findings, a person’s choice of hobby can be almost as relevant as his/her reaction to a psychological test.

Investigators found that a clearly distinguishable pattern exists between hobby preferences and personality. Scientists now say that they are in a position to study your hobby and come up with a relatively accurate estimate of your emotional maturity, level of intelligence, and distinguishing personality traits.

This is because people generally pick a hobby of their own free will. As a parallel, a person choosing a partner in life employs a method of selection that reflects his or her intellectual and emotional maturity; the same process is at work in choosing a hobby. A hobby is never a task, but a form of living expression that complements and develops one’s own personality.

14. The passage mainly discusses

- a. psychologists’ preferred hobbies
- b. benefits of having a hobby
- c. hobbies and personality traits
- d. useful spare time activities

15. The author explains in the passage that hobbies are
- only for the emotionally mature.
 - something most people have.
 - as important as friends.
 - very time-consuming activities.

PART II: GRAMMAR AND VOCABULARY

For items 1 through 20 choose the one correct answer a, b, c, or d.

1. Don't worry! I ... just ... my project.
- didn't...finish
 - been...finished
 - had...finished
 - have...finished
2. I ... my friends at Nina's house yesterday.
- have met
 - met
 - was meeting
 - meet
3. My sister's book ... next October.
- is to publish
 - will be published
 - will publish
 - was published
4. Everyone ... about the lives of famous people.
- interests in know
 - interest to know
 - is interested in knowing
 - is interesting know
5. I don't mind ... to work on foot.
- go
 - to going
 - for going
 - going
6. If I ... you, I would see a bank consultant as soon as possible.
- would be
 - have been
 - will be
 - were
7. The ceremony ... by family and friends.
- watches
 - watched
 - was watched
 - has watched
8. I wouldn't consider a new job if I ... promoted in the coming month.

- a. getting
- b. would get
- c. got
- d. will get

9. If your child ... vaccinated, make an appointment to the nurse before leaving.

- a. is not
- b. was not
- c. will be
- d. will not be

10. I would like to know the name of the girl ... in the bus stop every morning.

- a. which I meet
- b. whom I meet
- c. whom I meet her
- d. I meet her

11. If you don't mind, I would like to ... a suggestion.

- a. make
- b. show
- c. begin
- d. place

12. My brother practices basketball and I'm interested in sports

- a. still
- b. neither
- c. too
- d. either

13. Do you think they are ... of the risks they are taking?

- a. angry
- b. bad
- c. interested
- d. aware

14. She does not ... offering big dinners if we help her.

- a. agree
- b. mind
- c. respect
- d. care

15. The lecture was so ... that people almost fell asleep.

- a. bored
- b. boring
- c. exciting
- d. excitingless

16. I was so ... by the news that I did not know what to say.

- a. admired
- b. wondered
- c. liked
- d. surprised

17. Everybody ... him of doing it on purpose.

- a. threatened
- b. thought
- c. criticize
- d. accused

18. An honest man always ... his promise.

- a. hold
- b. retain
- c. sustains
- d. keeps

19. Happily, his ... from illness happened very fast.

- a. recovery
- b. repair
- c. survival
- d. relief

20. Oh, boy! I think I ... my purse in the office. Now I have to go back and take it.

- a. hid
- b. left
- c. lost
- d. found

PART III: WRITING

For items 1 through 4, choose the right word order.

1. a. The students are playing basketball now.
b. Basketball now students are playing.
c. Students playing basketball now are.
d. Are students playing the basketball now.

2. a. The rises sun in the east.
b. The sun rises in the east.
c. In the east rises the sun.
d. In the sun rises the east.

3. a. When you do leave in the morning the house?
b. Do you leave the house in the morning when?
c. When do you leave the house in the morning?
d. When leave you the house do in the morning?

4. a. Paul is leaving early tomorrow morning.
b. Paul leaving is tomorrow morning early.
c. Tomorrow Paul is leaving morning early.
d. Early tomorrow Paul is leaving morning.

For items 5 through 10, put the paragraphs *a* through *f* in order so as to make a letter. Write the order in the table below.

- a) I was so excited to get your letter. Of course you can spend a few days with me in London.
- b) Finally, I thought we could spend a few days at the seaside, maybe in Brighton. If you like this plan, get back to me soon so I can make reservations.
- c) First I thought we could visit some important places here such as Buckingham Palace and the British Museum. Oh, and we mustn't forget about Madame Tussaud's!

d) Hey John,

e) Can't wait to hear from you!

Yours,
Tom

f) Then we could go into the countryside and I could show you a few typical English villages. The people there are really friendly and so nice! You'll love them for sure!

B. PROBA 2 – MATEMATICĂ-ECONOMIE

1. Maximul funcției $f(x) = -2x^2 + 4x + 5$ este

a) 7; b) 1; c) 9; d) 2;

2. Maximul funcției $f(x) = 3x^2 - 2x + 7$ este

a) 20/3; b) 3/23; c) 3; d) 23;

3. Valoarea numărului natural n pentru care $3C_{2n}^{n+1} = 5C_{2n-1}^n$ este

a) 3; b) 1; c) 4; d) 5

4. Valoarea numărului C_n^0 este :

a) 1; b) 0; c) 2; d) 3.

5. Fie $(a_n)_{n \in \mathbb{N}}$ o progresie aritmetică ai cărei termeni satisfac sistemul de ecuații

$$\begin{cases} a_2 - a_6 + a_4 = -7 \\ a_8 - a_7 = 2a_4 \end{cases}$$

Atunci primul termen și rația acestei progresii aritmetice sunt :

a) $a_1=5, r=-2$; b) $a_1 = 2, r = 5$; c) $a_1 = 3, r = 1$; d) $a_1 = 4, r = 3$

6. Matricile A cu elemente numere reale ce satisfac egalitatea $A^2 = \begin{pmatrix} 0 & 1 \\ -1 & 0 \end{pmatrix}$ sunt :

a) $A = \pm \frac{1}{\sqrt{2}} \begin{pmatrix} 1 & 1 \\ -1 & 1 \end{pmatrix}$ b) $A = \pm \frac{1}{\sqrt{3}} \begin{pmatrix} -1 & 1 \\ 1 & -1 \end{pmatrix}$ c) $A = \pm \frac{1}{\sqrt{5}} \begin{pmatrix} 0 & 1 \\ -1 & 2 \end{pmatrix}$ d) $A = \begin{pmatrix} 0 & 1 \\ -1 & 0 \end{pmatrix}$

7. Valoarea numărului $\ln(e^2)$ este :

a) 1; b) 2; c) 0 ; d) e

8. Valoarea numărului $2^2+3^3+4^4$ este :

a) 287; b) 64; c) 27; d) 300

9. Soluțiile ecuației $X^2+2x+1=0$ sunt :

a) 1; b) -1; c) 4; d) 0

10. Valoarea numărului $\ln(1)$ este :

a) -1; b) 0; c) 6; d) 2

11. Suma numerelor $C_n^0+C_n^1+C_n^2+\dots+C_n^n$ este :

a) 2^n ; b) $1000n$; c) $3n$; d) 1

12. Următorul număr în secvența 1, 4, 16, 64este

a) 200; b) 256; c) 64; d) 4

13. Modulul numarului complex $z=3+4i$ este :

a) 2; b) 3; c) 4; d) 5

14. Suma solutiilor complexe ale ecuatiei $x^2=-1$ este

a) i ; b) $-i$; c) 0; d) 1

15. Suma solutiilor ecuatiei $3x^2 +5x+2=0$ este :

a) $-5/3$; b) $5/3$; c) $3/5$; d) $-3/5$

16. Valoarea polinomului X^3+1 in numarul complex i este:

a) $i-1$; b) $i+1$; c) $-i+1$; d) $-i-1$

17. Valoare numarului P_5 , adica permutari de ordin 5 este:

a) 30; b) 120; c) 20; d) 5

18. Partea reala a numarului complex i^3+i^5 este :

a) i ; b) 1; c) 0; d) -1

19. Fie inecuatiea $x^2<4$.

a) numarul 2 este solutie; b) numarul -2 este solutie; c) numarul $1/2$ este solutie; d) nici un raspuns corect

20. Produsul radacinilor ecuatiei $x^2-10x+5=0$ este

a) 1; b) 10; c) 5; d) nici un raspuns corect .

21. Prin consumul succesiv a unor unități din același bun economic, până la saturație, utilitatea totală (UT) este:

- a) pozitivă și descrescătoare;
- b) negativă;
- c) descrescătoare;
- d) pozitivă și crescătoare.

22. Între modificarea prețului și modificarea cantității cerute dintr-un bun există:

- a) o relație directă;
- b) o relație inversă;
- c) atât o relație directă cât și una inversă;
- d) o relație de la parte la întreg;

23. Dacă prețul unui bun (P) se reduce de la 300 la 250 u.m., iar cantitatea cerută (Q_C) crește de la 200 la 400 bucăți, coeficientul de elasticitate a cererii în raport de preț ($K_{eC/P}$) este:

- a) 2;
- b) 4;
- c) 12;
- d) 6.

24. Nu reprezintă capital tehnic:

- a) mașinile;
- b) utilajele;
- c) materiile prime;
- d) abilitatea întreprinzătorului.

25. Reprezintă un element de capital circulant:

- a) clădirile;
- b) calculatoarele de proces;

- c) materiile prime;
- d) mașinile.

26. În T_0 , productivitatea medie a muncii (W_L) la nivelul unei firme este de 20 bucăți pe salariat. În T_1 , producția (Q) sporește de 3 ori față de T_0 , când era de 200 bucăți, iar numărul de salariați (L) se dublează. Productivitatea marginală a muncii (W_{mGL}) este egală cu:

- a) 20 unități;
- b) 30 unități;
- c) 40 unități;
- d) 45 unități.

27. Când producția este zero, costul total este:

- a) egal cu costul fix;
- b) mai mic decât costul variabil;
- c) mai mic decât costul fix;
- d) egal cu costul variabil.

28. La o societate comercială, costul variabil mediu (CVM) este de 20 u.m. iar nivelul producției (Q) la care profitul (Pr) este nul 50 bucăți. Dacă prețul unitar (P) este egal cu 40 u.m., atunci costul total (CT), costul total mediu (CTM) și profitul total sunt:

- a) 1250; 25; 0;
- b) 3000; 60; 0;
- c) 2000; 40; 0;
- d) 2000; 80; 0;

29. Obținerea profitului nelegitim:

- a) contravine legii;
- b) este rezultatul raționalității în activitatea economică;
- c) nu este rezultatul contribuției firmei la activitatea economică;
- d) decurge întotdeauna din existența situației de monopol.

30. În perioada contemporană, masa monetară este formată, în cea mai mare parte, din:

- a) monezi metalice;
- b) bancnote;
- c) bani scripturali;
- d) numerar.