

# ADMITERE 2015

## SUBIECTELE PROBELOR ȘI BAREMELE DE CORECTARE ȘI NOTARE

### PROFILUL MAISTRI MILITARI

#### PROBA NR.1 TEST GRILĂ LA LIMBA ENGLEZĂ

#### VARIANTA 2

#### Partea I: CITIT

#### Bisons

Bisons have not always lived in North America, they are relative newcomers. They belong to the Bovidae family, like domestic cattle and the wild buffalo of Africa and Asia. The oldest known bison fossils have been found in China and Himalayan foothills, where an animal with all the essential features of the genus lived a million years ago. They evolved rapidly and spread over most of the northern hemisphere in Europe and Siberia. During one of the Ice Ages, the faunas of Asia and North America began to intermingle. Very early, the steppe bison moved eastward on dry land to the North American continent. Much later, men followed the same route.

1. Where were the first fossils found?
  - a. China and Himalaya
  - b. North America
  - c. Africa
  - d. Europe
  
2. When did the faunas of Asia and North America mix?
  - a. relatively recently
  - b. after people's migration
  - c. a million years ago
  - d. during the Ice Age
  
3. Bisons moved from Asia to North America by:
  - a. running through the foothills
  - b. crossing the sea
  - c. walking over the land
  - d. climbing over a bridge

## French legion

Before World War 2, the French Foreign Legion comprised about 45, 000 men. Today's legion, comprising 8,000 Legionnaires from more than 100 different countries, is one of the best-trained fighting forces in the world. The Legion selects the best of the thousands of men who apply every year. Many of them have previous military experience and criminals are prohibited from joining. Until the 1960s all new recruits were sent to Algeria for training but in 1962 the Legion returned to France. Today, recruits do their basic training there and most Legionnaires serve there, although some regiments are frequently away in South America or Africa in UN operations.

Many recruits join the Legion for excitement and adventure. For others, the reason is changing their names when they join or getting French nationality after three years' service. Life in the Legion is hard and there are more restrictions than in other armies. After joining, the recruit is not allowed any contact with the outside world, by phone or by mail, for at least three months. He is permitted to leave during basic training but after that they have to serve a five-year contract.

4. The number of soldiers in the French Foreign Legion is:
  - a. 8,000
  - b. 45,000
  - c. 1000
  - d. 80,000
  
5. Nowadays the recruits train in:
  - a. Algeria
  - b. South America
  - c. France
  - d. Africa
  
6. A Legionnaire obtains French nationality....:
  - a. when they join
  - b. after three years in the Legion
  - c. after basic training
  - d. after five years in the Legion

## Ten pounds

Mr. Smith gave his wife ten pounds for her birthday – ten one-pound notes. The next day, Mrs. Smith went shopping. On the bus she noticed that an old lady's handbag was open. Inside it, she saw some one-pound notes, exactly like the ones her husband had given her. So she quickly looked into her own bag: the notes had gone. Mrs. Smith was sure that the old lady sitting next to her had stolen them. She thought she would have to call the police; but as she disliked making a fuss and getting people into trouble she decided to take back the money and say nothing more about it. She looked round, making sure nobody was watching, and took the money from the lady's bag.

When she got home that evening, she showed her husband the beautiful hat she had got.

"How did you pay for it?" her husband asked.

"With the money you gave me for my birthday, of course," she replied.

"Oh? What's that, then?" he asked pointing to the notes on the table.

7. What did Mrs. Smith receive from her husband?
  - a. a handbag
  - b. a pound
  - c. ten one-pound notes
  - d. some pounds
  
8. When did Mrs. Smith go shopping?
  - a. the day after her birthday
  - b. on her birthday
  - c. after a while
  - d. the next week
  
9. What did she notice on the bus?
  - a. a young lady with a bag
  - b. some people calling the police
  - c. her husband watching her
  - d. some money in an old lady's bag
  
10. What did she buy?
  - a. a hat
  - a. a bag
  - b. a pound
  - c. a note

## Fishing

An English man living near Sheffield had the most unlucky day in fishing. He was standing on a low bridge when he had the misfortune to knock his tin of bait into the river. Leaning over the side of the bridge, he tried to hook the tin and pull it out of the river. As he did so, his car keys fell out of his pocket and disappeared into the water.

Feeling thoroughly annoyed, the fisherman lent over the bridge to try to see where his keys had gone. As he did so, the bridge collapsed and he fell into the river. This was the last straw. The fisher crawled out of the river and went back to his car. There he discovered that he had locked the doors and could not get in. There was nothing left for him to do but walk sadly home.

11. What happened with the bait?
  - a. the wind blew it into the water
  - b. it fell into the river with the fisherman
  - c. the fisherman dropped it into the river with the car keys
  - d. the fisherman knocked it in accidentally
  
12. When did the fisherman first lean over the bridge?
  - a. when the keys fell in
  - b. when the tin of bait fell in
  - c. when the bridge broke
  - d. when he started fishing

13. What was “the last straw”?
- the loss of his car keys
  - falling into the water
  - being unable to get into his car
  - having to walk home

## Robots

Some experts believe that robots will be able to do jobs, which at the moment only human beings can do; however, there are also others who disagree. One London Company, UAS has already developed machines that can be employed as “home-helps” for old people unable to look after themselves and who are living on their own. These machines can now carry out such things as cook eggs and clean the floor, and the company says that future models will be directed by simple voice instructions and controlled by a “brain”. Yet it is believed that we have a long way to go before we can develop truly intelligent machines.

14. The article informs us that:
- there are already machines which can do everything.
  - people will never invent effectively smart machines.
  - old people will be entirely helped by robots in the future.
  - robots cannot do all jobs that human beings can do.
15. The London company hopes to:
- create a robot to react to spoken commands.
  - sell robots to all old people in the world
  - develop robots more intelligent than people
  - control the whole market worldwide

## Partea a II-a: ELEMENTE DE GRAMATICĂ ȘI VOCABULAR

16. He is more \_\_\_\_\_ than his brother.
- generouser
  - most generous
  - generously
  - generous
17. I can see three \_\_\_\_\_ working in the garden.
- men
  - mans
  - man
  - man's
18. He always \_\_\_\_\_ Mary at the weekend.
- meet
  - is meet
  - meets
  - are meeting

19. \_\_\_\_\_ TV is a relaxing activity.
- To watching
  - Watch
  - Watched
  - Watching
20. He is waiting \_\_\_\_\_ the bus.
- to
  - with
  - for
  - at
21. If you \_\_\_\_\_ the car there, you will get a ticket.
- parked
  - park
  - parks
  - will park
22. Tom Jones is \_\_\_\_\_ famous singer.
- a
  - an
  - the
  - the one
23. John \_\_\_\_\_ his car yesterday.
- washed
  - has washed
  - washes
  - have washed
24. They would arrive on time if they \_\_\_\_\_ early.
- leave
  - has left
  - has been leaving
  - left
25. Victor \_\_\_\_\_ carry his suitcase, it is too heavy.
- must
  - cannot
  - must not
  - can
26. The teacher must \_\_\_\_\_ the students to do their homework.
- locate
  - remember
  - remind
  - point

27. Who is the \_\_\_\_\_ of the electric bulb?
- inventor
  - inventer
  - invention
  - inventing
28. It is difficult for Mary to carry the \_\_\_\_\_.
- luggages
  - luggage
  - many luggage
  - many luggages
29. Many people \_\_\_\_\_ watching TV.
- delight
  - amuse
  - enjoy
  - pride
30. \_\_\_\_\_ could you please tell the time?
- Excuse me
  - I apologize
  - I ask
  - I excuse you
31. Susan is \_\_\_\_\_ in sciences.
- interest
  - interested
  - interesting
  - very interesting
32. Last year I visited London. It is the biggest \_\_\_\_\_ I have ever seen.
- town
  - village
  - county
  - city
33. Tom's sister is a very \_\_\_\_\_ woman.
- attracting
  - attracted
  - attractive
  - very attracting
34. Alex works to assure a good \_\_\_\_\_ to his family.
- living
  - live
  - leaving
  - leave

35. My brother spent the \_\_\_\_\_ summer at the seaside.
- all
  - whole
  - every
  - hole

**Partea a III-a: SCRIS**

36. What is a standard finishing sentence for a formal letter?
- I can't wait to hear from you.
  - I expect you to answer me.
  - I look forward to hearing from you.
  - See you soon.
37. What is the correct form of address in a formal letter?
- Dear Mister
  - Dear Missis
  - Dear Jane
  - Dear Sir
38. Which sentence is correct?
- I did not do anything last night.
  - I did not do nothing last night.
  - I does not do nothing last night.
  - I did not did anything last night.
39. Which is the correct question?
- More seriously did Ben try to study?
  - Did Ben try to study more seriously?
  - Did try Ben to study more seriously?
  - Did Ben more seriously try to study?
40. Choose the most appropriate line to begin an informal letter?
- Mr. George,
  - Sir George,
  - Dear George,
  - Dear Mr. George,
41. Which phrase is used in a formal letter?
- Well, I must go now
  - I'm just writing to tell you
  - We regret to inform you that
  - Write back soon
42. Which question is correct?
- You go to the dentist once a year?
  - Go you to the dentist once a year?
  - Once a year go you to the dentist?
  - Do you go to the dentist once a year?

43. Which instruction is correct?
- Don't cross the street on the red light!
  - On the red light not cross the street!
  - The street don't cross on the red light!
  - Cross the street not on the red light!
44. Choose the correct statement:
- In the street are waiting for the bus those people.
  - Those people in the street are waiting for the bus.
  - Those people for the bus are waiting in the street.
  - For the bus those people are waiting in the street.
45. Which is the correct polite request?
- Mind you would helping me with the luggage?
  - Would you mind helping me with the luggage?
  - Help me with the luggage, mind you?
  - Would you the luggage help me to carry?

**GRILA DE CORECTARE  
VARIANTA 2**

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



**PROBA NR. 2**  
**TEST GRILĂ LA MATEMATICĂ ȘI FIZICĂ**  
**VARIANTA 3**

1. Pentru ce valori ale lui  $x$  este definită expresia:  $\sqrt[3]{\frac{x-1}{9-x^2}}$  ?
- a.  $x = 3$   
 $x \in (-\infty, -3) \cup (3, +\infty)$
- b.  $x = -3$
- c.  $x = \pm 3$
- d.
2. Se dă șirul  $(a_n)$ ,  $a_n = \frac{n}{n+1}$ . Să se determine șirul  $b_n$  astfel încât  $a_{n+1} = a_n + b_n, (\forall)n \geq 1$ .
- a.  $b_n = \frac{1}{n^2 + 3n + 2}$
- b.  $b_n = \frac{n}{n^2 + 3n + 2}$
- c.  $b_n = \frac{2}{n^2 + 2n + 2}$
- d.  $b_n = \frac{1}{n^2 + 2n + 1}$
3. Să se determine modulul vectorilor  $\overrightarrow{AB}, \overrightarrow{BC}, \overrightarrow{CA}$  dacă:  $A(0,-2), B(-2,-1), C(2,2)$ .
- a. Valorile vectorilor  $\overrightarrow{AB}, \overrightarrow{BC}, \overrightarrow{CA}$  sunt respectiv:  $2\sqrt{5}, 5, 2\sqrt{3}$
- b. Valorile vectorilor  $\overrightarrow{AB}, \overrightarrow{BC}, \overrightarrow{CA}$  sunt respectiv:  $\sqrt{5}, 5, 2\sqrt{5}$
- c. Valorile vectorilor  $\overrightarrow{AB}, \overrightarrow{BC}, \overrightarrow{CA}$  sunt respectiv:  $\sqrt{5}, \sqrt{5}, 2\sqrt{5}$
- d. Valorile vectorilor  $\overrightarrow{AB}, \overrightarrow{BC}, \overrightarrow{CA}$  sunt respectiv:  $\sqrt{5}, 5, \sqrt{5}$
4. Soluția ecuației  $\sqrt{x-1} + \sqrt{x+3} = 2$  este:
- a.  $x = \frac{3}{5}$
- b.  $x = 5, 2$
- c.  $x = 1$
- d.  $x = \sqrt{2}$
5. Soluția ecuației exponențiale  $3^{4-|x|} = 1$  este:
- a.  $x = 8$
- b.  $x = \pm 4$
- c.  $x = 4$
- d.  $x = -4$
6. Soluția ecuației logaritmice  $2\lg(2x+1) = \lg(x^2 + 7x + 61)$  este.
- a.  $x = 5$
- b.  $x = \frac{5}{3}$
- c.  $x = 3, (3)$
- d.  $x = \sqrt{10}$
7. Triunghiul ABC cu vârfurile  $A(10,4), B(12,-30)$  și  $C(0,0)$  este:
- a. isoscel
- b. echilateral
- c. dreptunghic
- d. oarecare

8. Fie matricile  $A = \begin{pmatrix} 1 & -8 & 2 \\ 4 & 5 & 1 \\ 3 & 2 & 1 \end{pmatrix}$  și  $B = \begin{pmatrix} 6 & -2 & 1 \\ 8 & 5 & -1 \\ 9 & 3 & -2 \end{pmatrix}$ . Rezultatul calculului AB este:

- a.  $\begin{pmatrix} -40 & -36 & 5 \\ 73 & 20 & -3 \\ 43 & 0 & -1 \end{pmatrix}$     b.  $\begin{pmatrix} -40 & -36 & 5 \\ 73 & 20 & -3 \\ 43 & 7 & -1 \end{pmatrix}$     c.  $\begin{pmatrix} -40 & -36 & 5 \\ 73 & 20 & -3 \\ 33 & 7 & -1 \end{pmatrix}$   
d.  $\begin{pmatrix} -40 & -36 & 5 \\ 73 & 10 & -3 \\ 43 & 0 & -1 \end{pmatrix}$

9. Să se calculeze următorul determinant de ordinul 2:  $\begin{vmatrix} \cos \theta & \sin \theta \\ \sin \theta & -\cos \theta \end{vmatrix}$ .

- a. 1                                      b.  $\sin^2 \theta$                                       c. -1                                      d.  $\sin^2 \theta + \cos^2 \theta$

10. O forță  $F=62\text{N}$  acționează timp de  $t=10\text{s}$  asupra unui corp de masa  $m$  deplasându-l o distanță  $x=310\text{m}$ . dacă mișcarea se efectuează fără frecare masa corpului este:

- a.  $m=10\text{kg}$                                       b.  $m=5\text{kg}$                                       c.  $m=25\text{kg}$                                       d.  $m=15\text{kg}$

11. Un tren care are viteza  $v_0=72\text{km/h}$  trebuie să se oprească pe o distanță  $x=600\text{m}$ . Timpul până la oprire trenului este:

- a.  $t=36\text{s}$                                       b.  $t=60\text{s}$                                       c.  $t=90\text{s}$                                       d.  $t=45\text{s}$

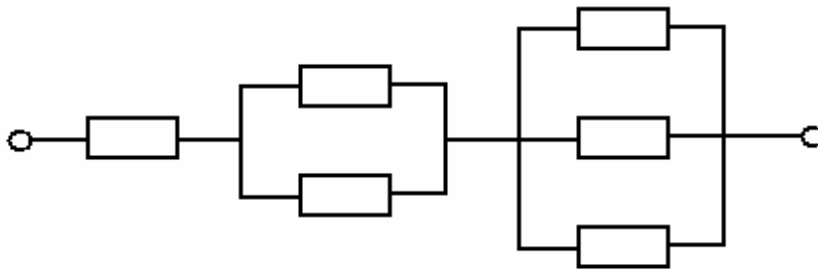
12. Legea lui Hooke are expresia matematică:

- a.  $T = E \frac{l_0}{s_0} \Delta l$                                       b.  $T = \frac{s_0}{l_0 E} \Delta l$                                       c.  $T = E \frac{l_0}{\Delta l} s_0$                                       d.  $T = E \frac{s_0}{l_0} \Delta l$

13. Relația dintre puterea medie  $P$  și lucrul mecanic  $L$  efectuat în intervalul de timp  $\Delta t$  este:

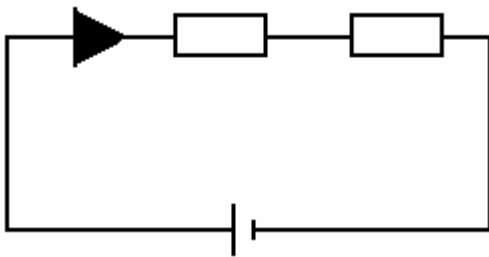
- a.  $P = L \cdot \Delta t$                                       b.  $P = \frac{L}{\Delta t}$                                       c.  $P = \frac{\Delta t}{L}$                                       d.  $P = \frac{L}{(\Delta t)^2}$

14. Rezistența echivalentă a circuitului din figură este:



- a.  $R = 50\Omega$       b.  $R = 10\Omega$       c.  $R = 150\Omega$       d.  $R = 20\Omega$

15. Se dă circuitul din figură unde tensiunea electromotoare  $E=12V$ , rezistența internă  $r=1\Omega$ ,  $R_1=3\Omega$  și  $R_2=2\Omega$ . Tensiunea la bornele sursei este:



- a.  $U=10V$       b.  $U=15V$       c.  $U=13V$       d.  $U=9V$

16. Considerăm un circuit electric format din două rezistoare  $R_1=5\Omega$  și  $R_2=2\Omega$  conectate în serie parcurse de un curent cu intensitatea  $I=3A$ . Puterea absorbită de la sursă are valoarea:

- a.  $P=56W$       b.  $P=15W$       c.  $P=63W$       d.  $P=62W$

17. Dacă două rezistoare diferite  $R_1=9\Omega$  și  $R_2=16\Omega$ , conectate pe rând la aceeași sursă de tensiune electromotoare  $E$  consumă aceeași putere atunci rezistența internă a sursei are valoarea:

- a.  $r=9\Omega$       b.  $r=12\Omega$       c.  $r=8\Omega$       d.  $r=14\Omega$

18. Puterea maximă debitată de o sursă de tensune electromotoare  $E$  cu rezistența internă  $r$  se obține atunci când:

- a. Rezistența exterioară  $R$  este nulă
- b. Rezistența exterioară  $R$  este egală cu rezistența interioară  $r$
- c. Rezistența exterioară  $R$  este dublul rezistenței interioare  $r$
- d. Rezistența exterioară  $R$  este jumătate din rezistența interioară  $r$

**GRILA DE CORECTARE LA MATEMATICĂ ȘI FIZICĂ  
VARIANTA 3**

<b>Nr. Item</b>	<b>Răspuns</b>
<b>1.</b>	<b>d</b>
<b>2.</b>	<b>a</b>
<b>3.</b>	<b>b</b>
<b>4.</b>	<b>c</b>
<b>5.</b>	<b>b</b>
<b>6.</b>	<b>a</b>
<b>7.</b>	<b>c</b>
<b>8.</b>	<b>b</b>
<b>9.</b>	<b>c</b>
<b>10.</b>	<b>a</b>
<b>11.</b>	<b>b</b>
<b>12.</b>	<b>d</b>
<b>13.</b>	<b>b</b>
<b>14.</b>	<b>a</b>
<b>15.</b>	<b>a</b>
<b>16.</b>	<b>c</b>
<b>17.</b>	<b>b</b>
<b>18.</b>	<b>b</b>