ŞCOALA MILITARĂ DE MAIŞTRI MILITARI ŞI SUBOFIȚERI A FORȚELOR AERIENE "TRAIAN VUIA" CONCURS DE ADMITERE SESIUNEA AUGUST 2017

TEST GRILĂ LA LIMBA ENGLEZĂ PROFILUL MAIȘTRI MILITARI

VARIANTA NR. 2

PARTEA I: CITIT

A month ago I had no idea that on a Saturday afternoon in November I'd be hanging 30 metres above the ground and enjoying it. Now I looked down at the river far below me, and realised why people love rock-climbing.

My friend Matt and I had arrived at the Activity Centre on Friday evening. The accommodation wasn't wonderful, but we had everything we needed (beds, blankets, food), and we were pleased to be out of the city and in the fresh air.

On Saturday morning we met the other ten members of our group. Cameron had come along with two friends, Kevin and Simon, while sisters Carole and Lynn had come with Amanda. We had come from various places and none of us knew the area.

We knew we were going to spend the weekend outdoors, but none of us was sure exactly how. Half of us spent the morning caving while the others went rock-climbing and then we changed at lunchtime. Matt and I went to the caves first. Climbing out was harder than going in, but after a good deal of pushing, we were out at last—covered in mud but pleased and excited by what we'd done

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

- 1. What is the writer trying to do in the text?
 - a. explain how to do certain outdoor sports
 - b. advertise the Activity Center
 - c. describe some people she met
 - d. say how she spent some free time
- 2. How do you think the writer might describe her weekend?
 - a. relaxed
 - b. frightening
 - c. unpleasant
 - d. interesting

Shopping is a necessary part of life which very few people can avoid. It is a daily routine for some people. Some people shop for pleasure while other people go shopping just to buy the necessary items in order to survive. The weekend is usually a good time to go shopping because people have free time from work. At this time the shops are usually very busy because people try to get the best items for the lowest price before the item runs out of stock.

Some people go shopping more regularly than other people to browse products in shops even when they do not have much money. This is known as window shopping and allows people to plan ahead and save for the things they want to buy in the future or wait for the items to drop in price. Some people spend a lot of time looking for bargains while others do not think of the price and are happy to spend a lot. Some people believe that the more expensive the item, the better the quality, but this is not always true. It is sensible to buy items which are affordable,

but some people use a credit card or borrow money from the bank so that they can buy the items they really want rather than wait for it.

Sometimes shopping can be stressful when choosing a gift to buy other people for a special occasion. It is common to buy a gift voucher so that a friend or loved one can go shopping themselves at their own convenience. Shopping online is often popular with people who have a busy lifestyle. People are able to order their necessary and luxury items from the comfort of their own home, or even on the move. Delivery is usually free and items are often cheaper than in shops on the high street. The only real problem is that the item description and quality may be different than what they hoped for. This could mean the customer may become disappointed with the item they receive and will need to return it at their own cost. People who go to shops to do their shopping often use self-service payment machines. This usually saves time as the shopper does not need to join a long queue. However, it can be frustrating when the machine has a problem and the sales assistant is not always available to help.

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

- 3. Why is the weekend a good time to go shopping?
 - a. People are free from work.
 - b. It is very busy on the weekend.
 - c. Things are usually cheaper.
 - d. The shops are closed.
- 4. What are people doing when they go shopping just to have a look and not to
- buy?
- a. Bargain hunting
- b. Window shopping
- c. They do not have much money
- d. Looking for the best quality
- 5. What do some people usually think about items of better quality?
 - a. They are more expensive
 - b. They are cheaper
 - c. They are harder to find
 - d. They are on sale
- 6. When can shopping be stressful?
 - a. When shops are about to close
 - b. When it is very busy
 - c. When buying a gift for someone
 - d. On the weekend
- 7. Is there sometimes a problem with online shopping?
 - a. No the shops are open 24 hours a day
 - b. Yes with the quality and description of the item
 - c. Yes there are too many queues
 - d. No there are no problems

The Coliseum is an ancient stadium in the center of Rome. It is the largest of its kind. It is very old. They started building it in the year 70. It took ten years to build. It is still around today.

The Coliseum has been used in many ways. In ancient Rome, men fought each other in it. They fought against lions, tigers, and bears. Oh my! It was dreadful. But most of the people loved it. As many as 80,000 Romans would pack inside to watch. These gruesome events went on until 523.

The Coliseum has been damaged many times over the years. It was struck by lightning in the year 217. This started a fire. Much of the Coliseum is made of stone. But the fire damaged the upper levels. They were made of wood. This damage took many

years to repair. It was not finished until the year 240.

The worst damage happened in 1349. A mighty earthquake shook Rome and the Coliseum. The south side of the building collapsed. Pieces of the arena were all over the ground. Many people took the fallen stones. Others took stones from the seating areas. They used them to repair houses and churches.

The Romans of those days were not connected to the Coliseum. It had last been used as a castle. Before that it was a graveyard. It has been hundreds of years since the games. The damage to the Coliseum was never repaired. It's a good thing the outer wall of it still stands strong.

Today the Coliseum is one of Rome's most popular attractions. People from all over the world come to Italy to see it. The Pope leads a big march around it every Good Friday. It is a symbol that many know. It has even appeared on the back of a coin. I guess that makes it a symbol that many people want too.

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

- 8. Which happened first?
 - a. An earthquake damaged the Coliseum.
 - b. The Coliseum appeared on the back of a coin.
 - c. The Coliseum was struck by lightning.
 - d. The Coliseum was used as a castle.
- 9. When did the Romans finish building the Coliseum?
 - a. The year 70
 - b. The year 523
 - c. The year 80
 - d. The year 240
- 10. What caused the fire that damaged the upper levels of the Coliseum?
 - a. A bolt of lightning
 - b. Rowdy people who came to watch the events
 - c. An attacking army
 - d. An angry mob
- 11. For which purpose was the Coliseum not used?
 - a. People fought other people in it.
 - b. It was a meeting place for the government.
 - c. It was a private castle.
 - d. People fought animals in it.
- 12. Which caused the most damage to the Coliseum?
 - a. Fires
 - b. Wars
 - c. Hurricanes
 - d. Earthquakes
- 13. What did the people do with the stones that they took from the Coliseum?
 - a. They sold them.
 - b. They used them as weapons.
 - c. They repaired buildings.
 - d. They used them as tombstones

c.	The Coliseum has its place in history but it is not useful today.
	The Consean should be used for righting once uguin.
DADTE A a H as El	EMENTE DE CDAMATICĂ SI VOCADIU AD
	, range
16. My	cat caught three
17. Did	he to the cinema yesterday?
a.	go
d.	gone
	·
d.	are meeting
20. She	can sing she can't dance.
a.	and
b.	because
d.	or
d.	wire

14. Which was not a way in which the Coliseum was damaged over the years?

a. Tornadob. Earthquake

22. When you are in the Army you must wear uniform.
a. an
b. a
c. lots
d. no
23. Your car is to mine.
a. before
b. after
c. but
d. next
24. When my cousin came in, I an apple.
a. ate
b. eat
c. eaten
d. was eating
25. I Jake yesterday.
a. visit
b. visits
c. visiting
d. visited
26. A: The food was horrible in this restaurant.
B: Yes, it was
a. nice
b. rich
c. mean
d. awful
27. My sister is very She is very friendly and has a lot of friends at
school.
a. easy-going b. outgoing
c. mean
d. stocky
28. Do you with your brother?
a. run out of
b. get on well
c. look up
d. come across
20 The helesses
29. The baby was She ate two more meals than usual.
a. amazed
b. thrilled
c. starving
d. delicious
30. I was when I saw how big the gift was.
a. amazed
b. fantastic
c. exhausting
d. hungry

	ou can depend on him. He is very
	a. helpless
	b. moody
	c. lazy
	d. reliable
	ne always chats to her friends. She is really
	a. untidy
	b. talkative
	c. shy
	d. polite
33. T	hey are very of their children. They give them what they need.
	a. fond
2.9	b. crazy
	c. keen
	d. serious
	e don't drinking green tea. We quite like it.
	a. bear
	b. stand
	c. keep
	d. mind
	hen you something, you say it very quietly.
	a. demand
	b. whisper
	c. scream
	d. row
PARTEA a III-a:	
	t answer a, b, c or d.
	Thich is the correct question?
	a. Did you buy that suit yesterday?
	b. Did you bought that suit yesterday?
	c. Did buying you that yesterday suit?
	d. Did you yesterday bought that suit?
	Thich is the correct polite request?
	a. Mind you would helping me with the project?
	b. Help me with the project, mind you?
	c. Would you the project help me to carry?
	d. Would you mind helping me with the project?
	hoose the most appropriate line for an application letter.
	a. I would like to apply for the position.
	b. I need that job!
	c. I am the best. You must give me your best job!
	d. I am not interested in that job.
	hoose the most appropriate line to start an informal letter.
	a. See you soon!
	b. Dear Jack,
	c. Mr. Jack,
	d. Sir Jack,

40. What is the correct order?

- a. I was driving my new car when she called.
- b. Driving my new car was I she when called.
- c. I driving my new car when she was called
- d. Was new my car I driving when she called.

41. Which is the correct sentence?

- a. My address is UK, London, no 7, Park Street.
- b. My address is Park Street, UK, no 7, London.
- c. My address is Park Street, London, No 7, UK.
- d. My address is No 7, Park Street, in London, UK.

42. Choose the correct formal request.

- a. Please, state your name, rank and position!
- b. Tell me your name, rank and position!
- c. Your name, rank and position, will you?!
- d. Give me your name, rank and position!

43. Which is the correct order?

- a. a small thin Canadian lady
- b. a thin small Canadian lady
- c. a small Canadian thin lady
- d. a Canadian small thin lady

44. Which is the correct order?

- a. a plastic big red hat
- b. a big red plastic hat
- c. a red big plastic hat
- d. a bit plastic red hat

45. Which of these is a correct formal letter introduction?

- a. Hello Mr. Jones
- b. Hello John
- c. Dear Mr. Jones
- d. Alright Mate

GRILA DE CORECTARE "LIMBA ENGLEZĂ" PROFILUL MAISTRI MILITARI

VARIANTA NR. 2

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

TEST GRILĂ LA MATEMATICĂ ȘI FIZICĂ - PROFILUL MAIȘTRI MILITARI -

VARIANTA NR. 2

1. Valoarea numărului real a pentru care funcția $f(x):[2,+\infty) \to (a,+\infty)$ dată prin relația $f(x)=x^2-4x+3$ este bijectivă:

a.
$$a = 0$$
;

b.
$$a = -1$$
;

c.
$$a = 2$$
;

d.
$$a = 1$$
;

2. Soluția ecuației logaritmice $\lg(x^2 - 4x + 2) = \lg(x - 2)$ este:

a.
$$x = 24$$
;

b.
$$x = 4 \text{ si } x = 1$$
;

c.
$$x = 3$$
;

d.
$$x = 4$$
;

3. Rația și primul termen al progresiei artimetice pentru care $a_7=17$ și $a_2=2$

a.
$$r = 2$$
; $a_1 = 1$;

b.
$$r = 4$$
; $a_1 = 2$;

c.
$$r=2$$
; $a_1=-1$;

d.
$$r = 3$$
; $a_1 = -1$;

4. Soluțiile ecuației de gradul al-II-lea $3x^2 - x - 10 = 0$ sunt:

a.
$$x_1 = 2$$
; $x_2 = -\frac{5}{3}$;

b.
$$x_1 = 1; x_2 = -\frac{5}{3};$$

c.
$$x_1 = -2; x_2 = \frac{5}{3};$$

d.
$$x_1 = -\frac{5}{3}$$
; $x_2 = -2$;

5. Produsul matricial $\begin{pmatrix} 4 & 5 \\ 6 & -1 \end{pmatrix} \begin{pmatrix} 2 & 1 \\ -3 & -2 \end{pmatrix}$ este:

a.
$$\begin{pmatrix} -7 & -4 \\ 11 & -2 \end{pmatrix}$$
;

b.
$$\begin{pmatrix} -7 & -1 \\ 14 & 7 \end{pmatrix}$$
;

c.
$$\begin{pmatrix} -7 & -6 \\ 15 & 8 \end{pmatrix}$$
;

d.
$$\begin{pmatrix} -6 & -2 \\ 10 & 9 \end{pmatrix}$$
;

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6. Următoarea matrice \begin{pmatrix} 2^x & 5^x \\ 4^x & 10^x \end{pmatrix} este inversabilă?
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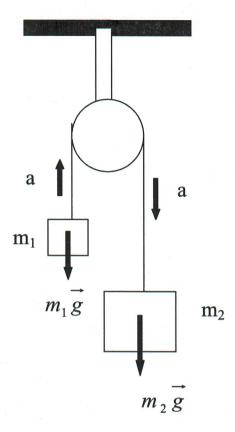
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a. nu;
```

b.da;

c. da, dacă
$$x = 1$$
;

d. da, dacă
$$x = -1$$
;

- 7. Funcția $f: R \to R$, $f(x) = 5x^4 11$ este:
- a. nu poate fi studiată paritatea funcției;
- b. impară;
- c. pară pe $(-\infty,0)$ și impară pe $(0,+\infty)$;
- d. pară;
- 8. Conjugatul numărului complex $(\sqrt{2} i)(\sqrt{2} + i)$ este:
- a. 3;
- b. 1 i;
- c. 1+i;
- d. i;
- 9. Se consideră punctele în plan de coordonate carteziene A(2,3) și B(3,4). Lungimea segmentului [AB] este:
- a. $2\sqrt{2}$;
- b. $\sqrt{5}$;
- c. $\sqrt{3}$;
- d. $\sqrt{2}$;
- 10. Un vagon se desprinde de locomotivă, care se deplasează cu o viteză constantă de 36 km/ora. După 10 secunde viteza vagonului scade la 28, 8km/ora. Să se calculeze timpul după care vagonul se oprește și distanța străbătuta până la oprire:
- a. t = 30s; d = 175m;
- b. t = 50s; d = 250m;
- c. t = 43s; d = 270m;
- d. t = 60s; d = 310m;
- 11. Se consideră sistemul cu scripete fix din figura:



Determinați accelerația.

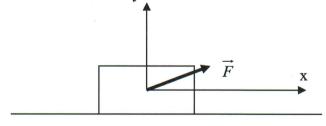
a.
$$a = \frac{m_2 - m_1}{m_2 \cdot m_1} \cdot g$$
;

b.
$$a = \frac{m_2 + m_1}{m_2 - m_1} \cdot g$$
;

c.
$$a = \frac{m_2 + m_1}{m_2 \cdot m_1} \cdot g$$
;

d.
$$a = \frac{m_2 - m_1}{m_2 + m_1} \cdot g$$
;

12. Asupra unui corp se exercită o forța \vec{F} , care este orientată sub un unghi $\alpha=30^{\circ}$ fața de orizontală. Lucrul mecanic aplicat în fiecare secundă este L= 100J. Ce valoare are forța aplicată.



a.
$$F = 65 \text{ N}$$
;

b.
$$F = 80 N$$
;

c.
$$F = 77 N$$
;

d.
$$F = 70 N$$
;

13. Calculați masa obiectului ce poate fi ridicat, cu o viteză constantă de 90m/min, de către o macara al cărei motor dezvoltă o putere de 12 Kw. Se consideră g= 9,8m/s²

```
a. m = 850 \text{ kg};
```

b.
$$m = 820 \text{ kg}$$
;

c.
$$m = 816,3 \text{ kg}$$
;

d.
$$m = 876 \text{ kg}$$
;

14. Cum se conectează un voltmetru într-un circuit electric.

- a. în serie;
- b. în paralel;
- c. în partea opusă sursei electrice;
- d. lângă sursa electrică;

15. Care este valoare în Jouli a energiei electrice?

a.
$$3,6 \cdot 10^6 J$$
;

b.
$$2.9 \cdot 10^5 J$$
;

c.
$$7,1\cdot10^6 J$$
;

d.
$$4,18 \cdot 10^3 J$$
;

16. Calculați rezistența echivalentă între bornele A și B pentru rețeaua electrică din figura de mai jos.

$$R_1 = 15\Omega;$$

$$R_2=20\Omega$$
;

$$R_3 = 30\Omega;$$

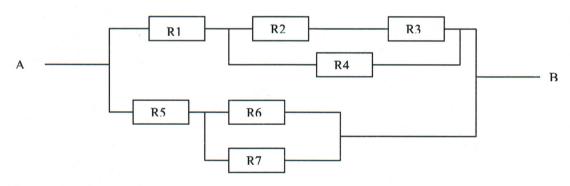
$$R_4=50\Omega$$
;

$$R_5=39\Omega$$
;

$$R_6 = 70\Omega$$
;

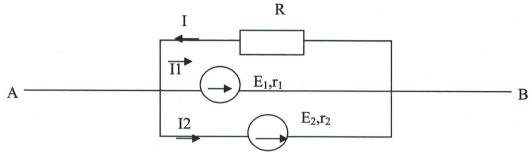
 $R_7 =$

 30Ω



- a. $R_{AB}=24\Omega$;
- b. $R_{AB}=30\Omega$;
- c. $R_{AB}=45\Omega$;
- d. $R_{AB}=0\Omega$;

17. În circuitul din figura de mai jos E_1 =60 V, E_2 = 30V, R=18 Ω , I_1 =2A, I_2 =1A. Calculați curentul în circuitul exterior.



- a. I=-3A;
- b. I=3A;
- c. I=6A;
- d. I=9A;

18. Un circuit eletric este format dintr-un rezisor $R=19~\Omega$ și un generator E=2V și $r=1\Omega$. Calculați intensitatea curentului electric din circuit.

- a. I = 0,3 A;
- b. I=0,2A;
- c. I = 0,1A;
- d. I= 2A;

GRILA DE CORECTARE LA "MATEMATEICĂ-FIZICĂ" PROFILUL MAIȘTRI MILITARI

VARIANTA NR. 2

Nr. item	Răspuns
1.	ь
2.	d
3.	d
4.	a
5.	С
6.	a
7.	d
8.	a
9.	d
10.	b
11.	d
12.	С
13.	С
14.	b
15.	a
16.	a
17.	b
18.	С