



پژوهندگان علم

نام آزمون: زبان ۱۱ تجربی

تاریخ آزمون: ۱۴۰۳/۰۸/۰۸

1 - Circle the correct option.

1. Foreign languages are difficult, and (few/a few) people learn them perfectly.
2. I'm going to a museum with (few/a few) friends next week.
3. Life is very hard in the Arctic, so (few/a few) people live there.
4. There are (few/a few) women politicians in the world. Many people think there should be more.
5. I've got (few/a few) cakes to give away. Would you like one?
6. Unfortunately, I have (few/a few) problems at the moment.
7. Well, I think I probably made (few/a few) mistakes, but I have the feeling I did well overall.
8. There are (few/a few) programs on television that I want to watch. I prefer to download a film or read a novel.

2 - Circle the correct option.

1. The weather has been very dry recently. We've had (a little / little) rain.
2. I wish I could sleep (a little / little) longer, but I have to get to class.
3. There's (a little / little) milk left in the fridge. It should be enough for our coffee.
4. Ann is very busy these days. She has (a little / little) free time.
5. I don't think Jill would be a good teacher. She's got (a little / little) patience with children.
6. Are you thirsty? There's (a little / little) juice left in this bottle, if you'd like it.
7. I stayed up too late last night; I got very (a little / little) sleep.
8. Would you like (a little / little) honey in your tea?

3 - Fill in the blank with a few, few, a little or little.

1. 'When did Sarah go out?' minutes ago'.
2. I can't decide now. I need time to think about it.
3. There was traffic, so we arrived earlier than we expected.
4. The bus service isn't very good at night - there are buses after 6 o'clock.
5. 'Would you like some soup?' 'Yes, , please
6. I'd like to practice my English more but I have opportunities.
7. Last night I wrote letters to my family friends.
8. I'm going out for a walk. I need fresh air.
9. I drink very coffee. I don't like it.
10. There was food in the fridge. It was nearly empty.



4 - There are some mistakes in each sentence. Find and correct them.

1. The terrible news we heard today were absolutely false.

.....

2. I cooked three fishes for dinner.

.....

3. Rosa's hairs are long and her clothes are very stylish.

.....

4. She gave me some wrong informations. Her advices were incorrect.

.....

5. Henry drank two warm cup of coffees.

.....

6. Physics are a difficult class. I don't seem to understand them.

.....

7. How many furniture are there in your apartment?

.....

8. I bought two cheeses and 3 milks.

.....

5 - Unscramble the following sentences.

1. divided - their - the - children - skills - groups - according - teacher - the - into - to.

2. understand - package - explanations - didn't - drug - I - the - on - the.

3. is - alive - impossible - to - it - stay - desert - in - water - the - without.

4. have - their - children - Japan - a lot of respect - teachers - for - in.

5. a - access - few - this - people - have - to - information - only.

6 - Circle the correct options.

1. Can you help me to move the (furnitures / furniture)?

2. We bought some new (equipments / equipment) for the factory.

3. I'd like to order a cup of (coffees / coffee), please.

4. The price was ten thousand (dollars / dollar).

5. The (traffic was / traffic were) so bad that I didn't get home until eight.

6. I love eating (fruits / furuit).

7. I love eating (banana / bananas).

8. I have (a / some) good news to tell you!

9. How (much / many) luggage did you bring?

10. How (much bag / many bags) did you bring?



7 - Use the correct form of the given nouns to complete the following sentence.

language party fun vegetable information fruit money hair advice child

1. We can buy fresh from the supermarket.
2. Mrs. Lee went to the travel agent for some about the tour to Japan.
3. How many does Jenny speak?
4. She spends a lot of on clothes.
5. I don't know what to do. please give me some
6. Karen has beautiful
7. We had a lot of at the party last night.
8. Susan enjoys going to
9. Alan eats a lot of
10. Many young attend language institutes these days.

8 - Write " a ", " an " or " some " before the following nouns.

- | | |
|-----------------|---------------------|
| 1. mail | 2. advice |
| 3. apple | 4. traffic |
| 5. hair | 6. information |
| 7. job | 8. work |
| 9. soup | 10. homework |
| 11. friend | 12. sand |
| 13. piece | 14. news |



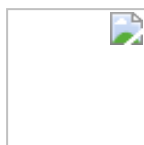
9 - Find countable and uncountable nouns in the passage and write them down below.

This is my kitchen. We've just been shopping. There are some apples in the cupboard and some grapes in the fridge. There is some water and some pasta on the table. We didn't buy any juice or any eggs, but we did buy some bread. Mmmm, I'm hungry- I think I 'd like a sandwich. "Mum! I want a sandwich! Have we got any cheese or any tomatoes?"

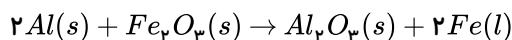
Countable	Uncountable

10 - Circle the right answer which best completes the passage.

This morning, I'm going to the supermarket. I'm going to buy a packet/bottle (1) of rice, a can/piece (2) of chicken soup, some/any (3) eggplants and a packet/tube (4) of biscuits. I also need two cartons/jars (5) of milk, a kilo/tin (6) of bananas, a watermelon and a loaf/cube (7) of bread for breakfast tomorrow. Besides, I want to make a cake. So, I have to buy some/a little (8) ingredients. I need a sheet/bar (9) of chocolate, a bag/slice (10) of flour and a bag/drop (11) of sugar. How hungry I am!



۱ - یکی از واکنش‌هایی که در صنعت جوشکاری از آن استفاده می‌شود؛ واکنش ترمیت است:

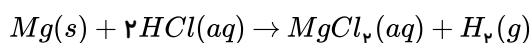


الف) مشخص کنید کدام فلز فعال‌تر است؛ آلومینیم یا آهن؟ چرا؟

ب) حساب کنید برای تولید ۲۷۹ گرم آهن، چند گرم آلومینیم با خلوص ۸۰ درصد لازم است؟ ($Fe = 56$, $Al = 27 : g \cdot mol^{-1}$)

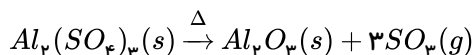
۲ - در صورتی که بازده درصدی واکنش زیر، ۹۰ باشد؛ برای تهیه ۳٫۷۵ لیتر گاز هیدروژن در شرایط STP ، چند گرم فلز را باید با مقدار کافی محلول

هیدروکلریک اسید واکنش دهیم؟ ($Mg = 24 g \cdot mol^{-1}$)

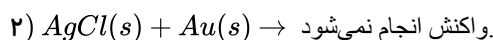
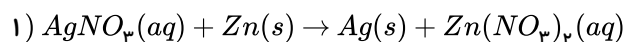


۳ - از تجزیه کامل ۱۷٫۱ گرم آلومینیم سولفات، ۲٫۵۲ لیتر گاز گوگرد تری‌اکسید در شرایط STP تولید می‌شود. مقدار نظری گاز گوگرد تری‌اکسید و

بازده درصدی واکنش را محاسبه کنید. ($S = 32$, $Al = 27$, $O = 16 : g \cdot mol^{-1}$)



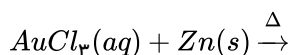
۴ - با توجه به واکنش‌های زیر به پرسش‌های مطرح‌شده پاسخ مناسب بدهید.



الف) معادله واکنش (۱) را موازنه کنید.

ب) واکنش‌پذیری عنصرهای Ag و Hg را باهم مقایسه کنید.

پ) پیش‌بینی کنید آیا واکنش زیر در شرایط مناسب انجام می‌شود؟ چرا؟

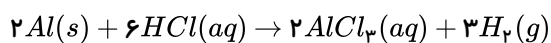


۵ - برای تولید ۲۰ گرم گاز کربن‌دی‌اکسید مطابق معادله موازنه‌شده واکنش $C(s) + O_2(g) \rightarrow CO_2(g)$ ، نیاز به قطعه‌ای زغالی به جرم ۶ گرم برای

سوزاندن داریم. بازده درصدی واکنش را تعیین کنید. ($C = 12$, $O = 16 : g \cdot mol^{-1}$)



۶- ۱۰۰ میلی لیتر محلول ۲ مول بر لیتر هیدروکلریک اسید با مقدار کافی از فلز آلومینیم خالص مطابق معادله موازنه شده زیر واکنش می دهد: ($H = 1 : g \cdot mol^{-1}$)

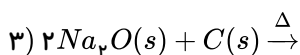
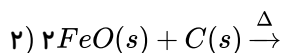
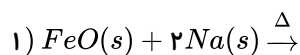


الف) تعداد مول های HCl را در این محلول محاسبه کنید.

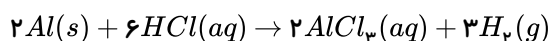
ب) مقدار نظری گاز H_2 را محاسبه کنید.

پ) اگر در پایان واکنش، ۱۹ گرم گاز هیدروژن به دست آید؛ بازده درصدی واکنش را محاسبه کنید.

۷- کدام یک از واکنش های زیر، انجام پذیر و کدام یک از آنها، انجام ناپذیر است؟ چرا؟



۸- از واکنش ۵۴ گرم فلز آلومینیم با درصد خلوص ۸۰ با محلول هیدروکلریک اسید، چند لیتر گاز هیدروژن در شرایط STP ایجاد می شود؟ ($Al = 27g \cdot mol^{-1}$)



۹- ۱۵ گرم پتاسیم نیترات با خلوص ۳۰٪ را به ۵ گرم پتاسیم نیترات با خلوص ۶۰٪ اضافه می کنیم. درصد خلوص پتاسیم نیترات در مخلوط حاصل برابر چند است؟

۱۰- دو لیتر محلول ۲۴٫۵٪ جرمی فسفریک اسید (H_3PO_4) با چگالی $1.2g \cdot ml^{-1}$ با مقدار کافی کلسیم هیدروکسید جامد واکنش می دهد. اگر بازده واکنش ۷۰٪ باشد؛ چند گرم رسوب تشکیل می شود؟ ($Ca = 40, P = 31, O = 16, H = 1 : g \cdot mol^{-1}$)

