**话题三十 自然科学研究成果**

**第一部分 话题词汇积累**

**单词&短语**

1.acid n.\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

2.atom n.\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

3.botany n.\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

4.cell n.\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

5.charge n.\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

6.chemical n.\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

7.chemist n.\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

8.chemistry n.\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

9.circuit n.\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

10.compound n.\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

11.current n.\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

12.electricity n.\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

13.element n.\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

14.energy n.\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

15.evolution n.\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

16.experiment n.\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

17.force n.\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

18.formula n.\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

19.gene n.\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

20.genetics n.\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

21.organism n.\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

22.microscope n.\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

23.modern technology\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

24.new frontier\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

25.have an effect on/upon\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

26.high tech products\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

27.household robot\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

28.industrial robot\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

29.digital technology\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

30.make full use of\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

词汇拓展

1.strike v.撞；碰；撞击；碰撞；打；击；击打，踢(球等)n.罢工；罢课；罢市；军事进攻；袭击；(尤指)空袭

【搭配】 strike at朝……打击

strike against撞……

strike sb.on the head打某人的头

go on strike举行罢工

be on strike在罢工

The teacher\_\_\_\_\_\_\_\_\_\_\_the table whenever he was angry.

教师一生气就敲桌子。

\_\_\_\_\_\_\_\_\_\_\_while the iron is hot.趁热打铁。

The clock has just\_\_\_\_\_\_\_\_\_\_\_twelve.十二点的钟声刚刚响过。

Visitors to Hangzhou are usually\_\_\_\_\_\_\_\_\_\_\_by the beautiful scenery.

到杭州的游客常被那里的美景迷住。

His cousin was said to be\_\_\_\_\_\_\_\_\_\_\_\_by a snake.据说他的表姐被蛇咬伤了。

Workers often\_\_\_\_\_\_\_\_\_\_\_in that country.那个国家的工人经常罢工。

2.hang v,悬挂；吊；垂下；垂落；(使)低垂，下垂，n.(衣服、织物等的)悬挂方式，下垂

【搭配】 hang on等一下

hang about闲逛；徘徊

hang out出外玩儿；晾衣服

hang off拉开；踌躇不前

hang up把……挂起来；挂断

hang over暂时搁置；挂在……上

let it all hang out宜泄感情

hang(on)in there坚持，不气馁

I\_\_\_\_\_\_\_\_\_\_\_my coat on a hook.我把大衣挂在钩子上。

The king\_\_\_\_\_\_\_\_\_\_\_himself from the tree.国王就是在这棵树上吊死的。

She\_\_\_\_\_\_\_\_\_\_\_\_her head in shame.她含羞低下了头。

The decision is still\_\_\_\_\_\_\_\_\_\_\_尚未做出决定。

On National Day red flags are\_\_\_\_\_\_\_\_\_\_\_out of every window.

国庆节那天，每个窗口都挂出红旗。

I\_\_\_\_\_\_\_\_\_\_\_when our talk was through.我们谈完后，我就把电话挂断了。

活学活用

一、阅读下列句子，在空白处填入1个单词或用括号内所给单词的适当形式填空，

1.I will give you a phone call the moment I\_\_\_\_\_\_\_\_\_\_\_\_(arrive)in Beijing.

2.Unless extra money\_\_\_\_\_\_\_\_\_\_\_(find),the theatre will close.

3.If he\_\_\_\_\_\_\_\_\_\_\_(accept) the job, he\_\_\_\_\_\_\_\_\_\_\_(get)more money soon.

4. Tai Chi\_\_\_\_\_\_\_\_\_\_\_(call)"shadow boxing"in English.

5.I was reading when the telephone\_\_\_\_\_\_\_\_\_\_\_\_(ring).

6.Mr White, as well as his two sons\_\_\_\_\_\_\_\_\_\_\_(drive)on the road when they saw a strange animal in front of him.

7.If the new students\_\_\_\_\_\_\_\_\_\_\_(accept),many universities will offer them an instruction.

8.We\_\_\_\_\_\_\_\_\_\_\_\_(watch)TV when suddenly a fire\_\_\_\_\_\_\_\_\_\_\_(break)out in the kitchen.

9.I\_\_\_\_\_\_\_\_\_\_\_\_(eat)with my wife when we heard aloud noise.

10.On 22th December,2020,a growing up ceremony\_\_\_\_\_\_\_\_\_\_\_\_\_(hold)in each classroom of grade 3students.

11.Look! Some students\_\_\_\_\_\_\_\_\_\_\_(run)on the playground,

12.Then I\_\_\_\_\_\_\_\_\_\_\_(begin)to feel out of patience.

13.This book\_\_\_\_\_\_\_\_\_\_\_(write)by a middle school student in 2000.

14.The room was so hot that she\_\_\_\_\_\_\_\_\_\_\_\_(feel)dizzy.

15.In his twenties,every day he\_\_\_\_\_\_\_\_\_\_\_\_(ride)his old bicycle to his office.

二、翻译句子

1.如果能得到这份工作，我将竭尽全力做好它。

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

2.我写信是想为未能参加你的生日聚会道款。

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

3.自从我来到中国已经有半年了。

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

4.这几天我一直在忙着准备英语演讲比赛。

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

参考答案

单词&短语

1.酸；酸类 2.原子 3.植物学 4.细胞 5.电荷6.化学品 7.化学家 8.化学 9.电路 10.化合物11.(水，气，电)流 12.电 13.元素 14.能量；能源15.进化 16.实验 17.力 18.公式，配方 19.基因20.遗传学21.有机体；生物 22.显微镜

23.现代科技 24.新领域 25.对……有影响 26.高科技产品 27.家用机器人 28.工业机器人 29.数字技术

30.充分利用

词汇拓展

1.struck;Strike;struck;struck;struck;strike

2.hung;hanged;hung;hanging;hung;hung up

活学活用

一、1.arrive 2.is found 3.accepts; will get 4.is called

5.rang 6. was driving 7.are accepted 8.were watching;broke 9.was eating 10.was held 11. are running 12.began 13.was written 14.felt 15.rode

二、1.If I am offered the job,I will try my best/make every effort to do it well.

2.I am now writing to apologize to you for not attending your birthday party.

3.It has been/is half a year since I came to China.

4.I have been busy preparing for an English speech con-test these days.

**第二部分 话题阅读训练**

（A）阅读理解

This year, in March, I jumped into a heated pool in Califomia to meet a dolphin named Delle. As I approached her, Delle turned towards me and became playful, greeting me by splashing me with her beak. Delighted, I reached out to pat her shiny skin. It felt rubbery, which was the main giveaway that Delle the dolphin was a robot.

Just as fake(假的)animals are becoming very realistic,it's becoming increasingly less acccptable to use live animals for entertainment purposes. Documentaries like Blackfish (2013)and The Cove (2009) have exposed some of the horrific treatment and suffering of occan mammals. The resulting public protest has made aquariums(水族馆)controversial, attracting less visitors.

Arguably，entertaining people with captive(圈养的)animals is vital for animalconservation. Many zoos and aquariums actively try to promote conservation efforts byproviding educational experiences and encouraging interest in the natural world. This type of entertainment is useful, because it inspires people to care.

At first, this seems like a reason to avoid replacing the animals with technology. However, research in the rapid-developed field of human-robot interaction is showing astonishing resultson engagement with robots that can imitate lifelike behaviour. When physically interactive,robots attract a lot of attention. People tend to treat them like they’re alive,even though theyknow perfectly well they’re just machines.

If we start to replace the animals in our theme parks with machines, will this trend decreaseour wonder for the natural world? A bunch of people expressed negative gut reactions(本能反应)after I posted video of the robot dolphin on Twitter. And yet, I don’t believe that using this robotanimals will cause us to forget the worth of living creatures.

8．Why does the author mention Delle in paragraph 1?

A．To share a special experience.

B．To promote rubbery dolphins.

C．To draw attention to robot animals.

D．To describe a dolphin preformance.

9．What can we learn about live animals in zoos?

A．They are cruelly treated.

B．They make zoos popular.

C．They are well entertained.

D．They deserve conservation.

10．What is paragraph 4 mainly about?

A．Reasons for replacing animals with robots.

B．Benefits of entertaining people with robots.

C．Research results on interaction with robots.

D．Public concerns over engagement with robots.

11．What’s the author’s attitude to replacing animals with machines?

A．Favorable. B．Intolerant.

C．Doubtful. D．Unclear.

8．C    9．D    10．C    11．A

【导语】本文是一篇说明文。主要介绍了机器动物的运用以及社会对它的各种看法。

8．推理判断题。根据第一段最后两句“Delighted, I reached out to pat her shiny skin. It felt rubbery, which was the main giveaway that Delle the dolphin was a robot.（我很高兴，伸手拍拍她发亮的皮肤。感觉像橡胶一样，这是海豚黛勒是个机器人的主要证据。）”可推知，作者在第一段提到海豚黛勒是因为想要引出本文话题，吸引读者注意，让大家关注到有机器动物这个东西。故选C项。

9．细节理解题。根据文章第二段一、二句“Just as fake(假的)animals are becoming very realistic,it's becoming increasingly less acccptable to use live animals for entertainment purposes. Documentarics like Blackfish (2013)and The Cove (2009) have exposed some of the horrific treatment and suffering of occan mammals.（就像假动物变得越来越逼真一样，将活体动物用于娱乐目的也越来越难以接受。《黑鱼》(2013)和《海湾》(2009)等纪录片揭露了一些海洋哺乳动物遭受的可怕待遇和痛苦。）”可知，动物园里的活体动物也是值得我们保护的。故选D项。

10．主旨大意题。根据文章第四段第二句“However, research in the rapid-developed field of human-robot interaction is showing astonishing resultson engagement with robots that can imitate lifelike behaviour.（然而，在快速发展的人机交互领域的研究显示，与能够模仿逼真行为的机器人互动产生了惊人的结果。）”结合本段来看，本段主要是在介绍与机器人交互的研究成果。故选C项。

11．推理判断题。根据文章最后两句“A bunch of people expressed negative gut reactions(本能反应)after I posted video of the robot dolphin on Twitter. And yet, I don’t believe that using this robotanimals will cause us to forget the worth of living creatures.（我在推特上发布了机器海豚的视频后，很多人都表达了负面的本能反应。然而，我不相信使用这种机器动物会让我们忘记生物的价值。）”可推知，作者对于用机器人代替动物是持赞成的态度的。故选A项。

（B）七选五

 **A Nervous Journey**

Let’s take a journey. It is going to be a fast one, so be prepared. Where are we going? We are going to start at your head and end up at your toes. \_\_\_16\_\_\_ It may be the shortest and fastest trip of your life. Are you ready? Let’s begin. Wiggle your big toe. Okay, we’re done. You might be saying, “That’s it?” We said it was going to be a fast ride!

You just sent a message with an electrical signal from your brain to the muscles in your toe. Bingo! It moves. \_\_\_17\_\_\_ The electrical signals in your body can move as fast as 150 meters per second. In the amount of time it takes you to say “Mississippi” three times, a nerve could send an electrical signal the length of a football field and back. Now that you know how fast a nerve impulse (神经冲动) can travel, let’s take a look at the system that is the highway for these electrical signals.

The human body is made of trillions of tiny cells. Each cell is so small that you need a microscope to see them. Your skin, your hair, your eye — all are made up of cells. \_\_\_18\_\_\_ Muscle cells move your body. Skin cells protect your body. One special type of cell, neurons (神经元), allow your brain to send messages to every part of your body.

The center of the nervous system is the brain. The brain takes in what your eyes see and what your ears hear. \_\_\_19\_\_\_ You can think of your nervous system as a relay team passing a baton from one runner to the next. But instead of runners, you have cells, and instead of a baton, you have information. \_\_\_20\_\_\_ It hands its information to the next cell, which passes the information to another cell. In the end, the information reaches its destination and causes a change — maybe a muscle contracts. The “information” baton passed from neuron to neuron is usually a small electrical event called an action potential.

A．Just how fast was the signal moving?

B．A neuron in your brain starts the relay.

C．Different types of cells do different jobs.

D．You might have heard them called brain cells.

E．Did you ever wish you could go inside someone’s brain?

F．It may not seem like a long trip, but it is going to be fast.

G．If you decide that you want to move around, your brain tells your muscles to do it.

16．F    17．A    18．C    19．G    20．B

【导语】这是一篇说明文。文章介绍了大脑中的神经元通过神经冲动指挥人体行动的原理和过程。

16．根据前文“We are going to start at your head and end up at your toes.(我们将从你的头部开始，到你的脚趾。)”和后文“It may be the shortest and fastest trip of your life.(这可能是你一生中最短最快的一次旅行。)”可知，此处是指从头部到脚趾并不是一段很长的旅行，但是很快。所以选项F“这似乎不是一段漫长的旅程，但它会很快。”切合文意。故选F。

17．根据后文“The electrical signals in your body can move as fast as 150 meters per second.(你体内的电信号可以以每秒150米的速度移动。)”可知，此处是讲人体内的信号移动得有多快，所以选项A“信号移动的速度有多快？”切合文意。故选A。

18．根据后文“Muscle cells move your body. Skin cells protect your body. One special type of cell, neurons (神经元), allow your brain to send messages to every part of your body.(肌肉细胞推动身体运动。皮肤细胞保护你的身体。一种特殊类型的细胞，神经元，让你的大脑发送信息到你身体的每个部分。)”可知，此处是指不同类型的细胞做着不同的工作，所以选项C“不同类型的细胞做着不同的工作。”切合文意。故选C。

19．根据前文“The center of the nervous system is the brain. The brain takes in what your eyes see and what your ears hear.(神经系统的中心是大脑。大脑接收眼睛看到的和耳朵听到的。)”可知，此处是指大脑是行动的指挥中心，所以选项G“如果你决定要四处走动，你的大脑会告诉你的肌肉这样做。”切合文意。故选G。

20．根据后文“It hands its information to the next cell, which passes the information to another cell. In the end, the information reaches its destination and causes a change — maybe a muscle contracts. The “information” baton passed from neuron to neuron is usually a small electrical event called an action potential.(它将信息传递给下一个细胞，下一个细胞将信息传递给另一个细胞。最后，信息到达目的地并引起变化——也许是肌肉收缩。从一个神经元传递到另一个神经元的“信息”指挥棒通常是一个称为动作电位的小电事件。)”可知，此处是指神经元开始了接力赛，所以选项B“你大脑中的一个神经元开始了这个接力。”切合文意。故选B。

（C）语法填空

**Star Eating Purple for Your Health**

Eat a rainbow of colours often, as dietitians are fond of saying — and with good reason. Eating a variety of colourful food provides vitamins and minerals that can’t \_\_\_\_36\_\_\_\_ (replace) with supplement to nourish your body.

According to experts from Whole Foods, a food company in the United States, who examined consumer behaviour globally across 465 stores, our plates look very colourful this year, \_\_\_\_37\_\_\_\_ purple foods particularly popular. This is indeed the case. \_\_\_\_38\_\_\_\_ (walk) through any supermarket and you will find richly-coloured purple foods are popping on the shelves.

The purple food trend in the market is unsurprising, \_\_\_\_39\_\_\_\_ (give) how health-conscious people are becoming in recent years. People have long known \_\_\_\_40\_\_\_\_ the darker the colour of food, the higher the contents of antioxidants (抗氧化剂) and nutrients will be and the \_\_\_\_41\_\_\_\_ (healthy) the food. In fact, they are inspired to eat more purple foods because a study found that those who ate purple fruits and vegetables regularly often have low cholesterol (胆固醇) and a reduced risk of getting blood pressure.

Research shows that these foods get their purple colour from anthocyanins (花青素), \_\_\_\_42\_\_\_\_ have been linked with antioxidants and anti-aging properties in the body. Purple foods help promote bone health, and have also been shown \_\_\_\_43\_\_\_\_ (lower) the risk of some cancers and improve memory. Take purple sweet potatoes for example. \_\_\_\_44\_\_\_\_ the standard sweet potato is packed with health benefits of its own, the purple sweet potato is even better for us. Of course, you \_\_\_\_\_45\_\_\_\_\_ not switch to only eating purple foods. Eating a variety of colourful foods every day is the best. But do include purple ones!

36．be replaced    37．with    38．Walk    39．given    40．that    41．healthier    42．which    43．to lower    44．While##Though##Although    45．should

【导语】这是一篇说明文。正如营养师们喜欢说的那样，经常吃彩虹般的颜色——是有充分理由的。多吃色彩丰富的食物，可以提供无法替代的维生素和矿物质，滋养你的身体。

36．考查被动语态。句意：多吃色彩丰富的食物，可以提供无法替代的维生素和矿物质，滋养你的身体。此空是定语从句，that指代先行词vitamins and minerals，从句谓语replace与从句主语that构成被动关系，且can’t后跟动词原形。故填be replaced。

37．考查介词。句意：美国全食食品公司的专家对全球465家门店的消费者行为进行了调查，他们表示，今年我们的餐盘看起来色彩缤纷，紫色食品尤其受欢迎。此处为with的复合结构“with+名词+形容词”，作伴随状语。故填with。

38．考查祈使句。句意：走进任何一家超市，你都会发现货架上摆满了颜色鲜艳的紫色食品。此处为“祈使句+and+含一般将来时的陈述句”这一基本句型，首字母大写。故填Walk。

39．考查固定短语。句意：鉴于近年来人们越来越注重健康，市场上的紫色食品趋势并不令人惊讶。短语given (that)...，表示“考虑到，假定，已知”。故填given。

40．考查宾语从句。句意：人们早就知道，食物颜色越深，抗氧化剂和营养物质含量越高，越健康。引导宾语从句，从句中不缺任何成分，故填that。

41．考查比较级。句意：人们早就知道，食物颜色越深，抗氧化剂和营养物质含量越高，越健康。此处为“the+比较级，the+比较级”，表示“越……越……”，用形容词比较级。故填healthier。

42．考查定语从句。句意：研究表明，这些食物的紫色来自花青素，花青素与体内的抗氧化剂和抗衰老特性有关。非限制性定语从句修饰先行词anthocyanins，从句缺少主语，指物，用关系代词which。故填which。

43．考查非谓语动词。句意：紫色食物有助于促进骨骼健康，还被证明可以降低患某些癌症的风险，提高记忆力。appear/seem/report/say/show等动词后一般接不定式。故填to lower。

44．考查连词。句意：尽管标准的（一般化的）甜土豆含有自身的营养价值，紫色的甜土豆对我们而言就更好了。引导让步状语从句，表示“尽管”应用while、though或although，句首单词首字母要大写。故填While/Though/Although。

45．考查情态动词。句意：你不应该一味地只吃紫色食物。表示按道理应该去做某事，用情态动词should。故填should。