3.Fun Science about the Human Body(02)_YBM(박준언)



1. 다음 중 어법상 옳은 문장을 바르게 고른 것은?

There have been many theories about the origin and function of emotional tears. A prevailing theory in the 1600s held that emotions especially love - heated the heart, which generated water vapor in order to cool itself down. @This theory was rejected when Niels Stensen, a scientist in Denmark, discovered in 1662 that not emotions but the lacrimal gland, the tiny structure on the inside corner of the eye, are the proper origin of tears. Stensen's theory was that tears were simply a way to keep the eye moist. DA theory that crying removes toxic substances from the body that builds up during times of stress gained some popularity in the 20th century, although not scientifically proven. In recent years, evidence is mounting in support of new theories. One of them is that emotional tears trigger social bonding and human connection. © We cry from a very early age to bring about a connection with others, for we come into the world physically and emotionally unequipped to deal with anything on our own. Even though we become more capable as we grow, we never quite grow out of occasional attacks of helplessness. @ Crying signals to other people that we are experiencing some important problem that is beyond our ability to cope with. @In a 2016 study, test subjects were shown a photograph of someone visibly crying, and then showing the same photo with the tears removed.

	(a)	(C)
U)	ω,	\odot

② b, c

3 b, d

4 c, d

(5) (d), (e)

2. Choose people who are speaking of those who have similar characteristics as tears in the following passage?

In recent years, evidence is mounting in support of new theories. One of them is that emotional trigger social bonding and human connection. We cry from a very early age to bring about a connection with others, for we come into the world physically and emotionally unequipped to deal with anything on our own. Even though we become more "capable as we grow, we never quite grow out of occasional attacks of helplessness. Crying signals to other people that we are experiencing some important problem that is beyond our ability to cope with. In a 2016 study, test subjects were shown a photograph of someone visibly crying, and then shown the same photo with the tears removed. The result: they were much more likely to reach out to the person in the first photo.

Mike: Speaking of learning style, in general, people who tend to rely on information provided by the outer world, the field or frame of a situation and their (toward other things) are based on the overall field. They have a tendency to accept and refer to what other people say, thus dependent on people around them.

Zico: People from individualistic cultures are those that stress the needs of the individual over the needs of the group as a whole. "They are seen as independent and autonomous. Social behavior tends to be dictated by the attitudes and preferences of individuals. People from cultures in North America and Western Europe tend to be individualistic.

Jiyeon: People with this trait have tendencies below.

- st People often place a greater emphasis on standing out and being unique
- * People tend to be self-reliant
- * The rights of individuals tend to take a higher precedence

Suji: The survival and success of the group ensures the well-being of the individual, so that one protects oneself by considering the needs and feelings of others. Harmony and the interdependence of group members is stressed



and valued. Group members are relatively close psychologically and emotionally one another.

Alex: In a modern world, where people are getting busier and anonymity becomes usual, the ability to sense other people's emotions coupled with the ability to imagine what someone else might be thinking or feeling has been becoming ever critical. A person, as an incomplete being, needs to have continuous interactions with others all the time.

- ① Mike, Zico
- 2 Zico, Jiyeon
- 3 Zico, Jiyeon, Suji
- (4) Mike, Suji, Alex
- 5 Jiyeon, Mike, Suji, Alex

3. 다음 글에 비추어 볼 때, <보기>의 대화 내용 중에서 <u>잘못된</u> 것은?

All types of tears have three layers: a thin mucus layer that sits directly on the eye, a watery layer in the middle, and a thin oily layer on top that prevents the tear from evaporating. Interestingly enough, scientists have found that the types of tears are chemically different from each other. Compared to basal tears, the watery portion of reflex tears is larger and has higher levels of antibodies that can stop harmful microorganisms. On the other hand, emotional tears contain more protein. One interpretation is that this higher protein content makes emotional tears stickier, so they stick to the skin more strongly and run down the face more slowly, making them more likely to be seen by others. According to that interpretation, the more visible tears are, the more likely they are to bring out compassion from observers. "There must have been some point in time, evolutionarily, when tears became something that automatically set off empathy and compassion in another," says Michael Trimble, a doctor at University College London.

<보기>

- M: Emma, I'm curious about why we cry. And this article illustrates some interesting facts about tears.
- W: It's interesting. ① The author explained that the chemical make-ups of tears are somewhat different according to which types they belong to.
- M: Amazing. ② The fact that reflex tears have larger watery portion and more antibodies may reflect their function to remove irritants and aid the immune system.
- W: That's right. ③ For one more example, higher protein content makes emotional tears run down the face more swiftly.
- M: Yeah, ④ Protein makes emotional tears more visible, and the tears induce observers to feel sympathy for the person who is weeping.
- W: Yes, they certainly do. (5) It is said that humans, during a particular period of time, evolved the involuntary process in which tears arouse empathy and compassion.



4. 아래 글을 분석한 의견 중 글의 내용과 일치하는 것을 모두 고른 것은?

There have been many theories about the origin and function of emotional tears. A prevailing theory in the 1600s held that emotions - especially love - heated the heart, which generated water vapor in order to cool itself down. This theory was rejected when Niels Stensen, a scientist in Denmark, discovered in 1662 that not emotions but the lacrimal gland, the tiny structure on the inside corner of the eye, is the proper origin of tears. Stensen's theory was that tears were simply a way to keep the eye moist. A theory that crying removes toxic substances from the body that build up during times of stress gained some popularity in the 20th century, although not scientifically proven.

- A: Where tears really come from was not discovered until 1662.
- B: Niels Stensen, a Danish scientist, found emotional tears remove toxic substances from the body.
- C: A new theroy that water vapor for cooling the heated heart down is the proper origin of emotional tears was once popular in the 1600s.
- ① A

- ② B
- ③ A, B
- (4) A, C
- (5) A, B, C

5. 다음 빈칸에 들어갈 말로 가장 적절한 것을 고르 시오.

- ① Those who did not cry were less likely to make human relationship
- ② Some psychologists believed when people shed tears, they felt better after a while
- ③ Crying occurred as a result of an expression of your sorrow in response to the movie
- People had a really good cry to elicit help and support from those around them in their time of need
- ⑤ Crying demonstrated not only our deep emotional connections with others, but a pessimistic representation of who we were



6. 다음을 한 문장으로 요약하고자 한다. 빈칸 (A), (B)에 가장 적절한 것끼리 짝지어진 것은?

In recent years, evidence is mounting in support of new theories. One of them is that emotional trigger social bonding and human connection. We cry from a very early age to bring about a connection with others, for we come into the world physically and emotionally unequipped to deal with anything on our own. Even though we become more capable as we grow, we never quite grow out of occasional attacks of helplessness. Crying signals to other people that we are experiencing some important problem that is beyond our ability to cope with. In a 2016 study, test subjects were shown a photograph of someone visibly crying, and then shown the same photo with the tears removed. The result: they were much more likely to reach out to the person in the first photo.

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Emotional tears make others (A)_____ that a crying person undergoes difficulty and social bonding and human connection could be (B)____ by helping that person.

- ① (A) recognize (B) strengthened
- ② (A) recognize (B) diminished
- ③ (A) oppose (B) strengthened
- (4) (A) oppose (B) diminished
- (5) (A) deny (B) decreased

다음 실험을 통해 내릴 수 있는 결론으로 가장 올바른 것은?

In an experiment in which participants were shown a sad movie and had their mood measured right after watching it, those who had cried were actually in a worse mood than those who had not. However, after some time, the criers reported being in a better mood than they had been before watching the movie. Crying did relieve their mood, provided that they were given enough time for the benefits of crying to set in.

- ① Crying is not always followed by immediate regret.
- Watching a sad movie is one of the enjoyable hobbies.
- ③ Making people cry intentionally is not proper in the test ethics.
- Mood can be changed by the various surrounding circumstances.
- ⑤ Crying can relieve a person's mood but it takes sufficient time to make it.

8. 밑줄 친 the contrary is also true가 의미하는 바로 가장 적절한 것은?

A question arises: if tears are so important for human bonding, bringing out compassion, and reducing aggression, do people who do not cry have problems making social connections? The answer is, yes, mostly. Psychologists have discovered that such people have a tendency to relationship withdraw and describe their experiences as less connected. Another interesting fact is that while emotional states affect the production of tears, the contrary is also true. As a result, their social relationships tend to become troubled.

- ① People burst into tears when they are with friends who cry.
- ② The overreacted people get easily upset about the pretty small affairs.
- 3 The irrational people are set to appeal for the emotion of others to win them over.
- Those who try to face the hardship instead of escaping get the edge of success and fortune.
- ⑤ Those who have problems shedding tears are in trouble making friends and forming a relationship.



9. 다음 글의 밑줄 친 부분에 대한 설명 중, 가장 적절하지 <u>않은</u> 것은?

A prevailing theory in the 1600s held that emotions - especially love - heated the heart, ① which generated water vapor in order to cool itself down. This theory was rejected when Niels Stensen, a scientist in Denmark, ②discovered in 1662 that not emotions but the lacrimal gland, ③ the tiny structure on the inside corner of the eye, is the proper origin of tears. Stensen's theory was ④that tears were simply a way to keep the eye moist. A theory that crying removes toxic substances from the body ⑤that build up during times of stress gained some popularity in the 20th century, although not scientifically proven.

- ① and the heart generated water vapor로 바꿔쓸 수 있다.
- ② 'This theory ~ the proper origin of tears.' 문장 내의 핵심동사 역할을 한다.
- ③ the lacrimal gland 보충설명하는 삽입구이다.
- ④ 접속사로 완전한 문장을 이끈다.
- ⑤ toxic substances는 수식하는 관계대명사절이다.

* 다음 글을 읽고 물음에 답하시오.

Eyes are often called the windows to the soul. Eyes, as it turns out, provide a lot of information about a person's emotional state. One telling example is a smile. When you are truly happy, you smile not only with your mouth but also with your eyes. (@) In contrast, when people fake a smile, they usually forget about their eyes. ((b)) If the eye is the window into the soul, the pupil is quite literally an opening into the eye. (©) The pupil dilates or contracts to regulate the amount of light entering the eye. We all know that our pupils get smaller in the light and bigger in the dark. This is the pupillary light response. (@) The pupillary light response is not just a mechanical reaction to light. The pupils also adjust according to our emotions. (@) Encounter a bear while walking through the woods, and your alarm system goes on alert. Your heart and breathing rates increase, you begin to sweat, and your pupils dilate. The pupils will have adjusted themselves to the threat. Meet an attractive person at a party, and your heart and breathing rates increase, you begin to sweat, and your pupils dilate. The pupils will have adjusted themselves to the opportunity. None of these pupillary responses is under your control. Perhaps that is why eyes are called the windows to the soul, revealing your true emotional state, regardless of your will to control it.

10. 글의 흐름상 아래 주어진 문장이 들어가기에 가 장 적절한 곳은?

It is related to an alarm system in the body that prepares us to take action whenever we detect a threat or an opportunity in our environment.

① a

② **b**

3 C

(4) (d)

(5) (e)



11. 윗글의 내용과 일치하지 않는 것은?

- ① You can judge the true smile by seeing the eyes.
- ② The pupil controls the quantity of light through expansion and contraction.
- ③ The pupils don't automatically react to light but adapt to our emotions.
- Both detecting a bear and meeting an attractive person trigger same responses from our body.
- (5) We cannot regulate any of our pupillary responses.

※ 다음 글을 읽고, 물음에 답하시오.

(A)

All types of tears have three layers: a thin mucus layer that sits directly on the eye, a watery layer in the middle, and a thin oily layer on top that prevents the tear from evaporating.

(B)

On the other hand, emotional tears contain more protein. One interpretation is that this higher protein content makes emotional tears stickier, so they stick to the skin more strongly and run down the face more slowly, making them more likely to be seen by others.

(C)

According to that interpretation, the more visible tears are, the more likely they are to bring out compassion from observers. "There must have been some point in time, evolutionarily, when tears became something that automatically set off empathy and compassion in another," says Michael Trimble, a doctor at University College London.

(D)

Interestingly enough, scientists have found that the types of tears are chemically different from each other. Compared to basal tears, the watery portion of reflex tears is larger and has higher levels of antibodies that can stop harmful microorganisms.

12. 윗글의 내용과 일치하지 않는 것은?

- ① A mucus layer is the closest to the eye among three layers of tears.
- ② All tears do not evaporate thanks to an oily layer.
- ③ Protein contents can make emotional tears more perceptible to others.
- ④ Emotional tears might be developed to arouse people's sympathy.
- ⑤ The watery portion of reflex tears is the thickest compared to any other tears.

13. 주어진 글 (A)에 이어질 내용을 순서에 맞게 배열한 것으로 가장 적절한 것은?

① (B)-(D)-(C)

② (C)-(B)-(D)

③ (C)-(D)-(B)

④ (D)-(B)-(C)

⑤ (D)-(C)-(B)



* 다음 글을 읽고, 물음에 답하시오.

- (A) Crying is a human characteristic that other animals do not have. Though some species shed tears as a result of pain or irritation, humans are currently known as the only creatures whose tears can be triggered by their feelings. Charles Darwin once declared emotional tears "purposeless." Contrary to Darwin's declaration, however, scientists have recently found that crying plays a lot more important role than was once believed.
- (B) First, let's define the terms. Crying is scientifically defined as the shedding of tears in response to an emotional state. These tears are called psychic or emotional tears. Differentiated from psychic or emotional tears, non-emotional tears are divided into two types: basal tears and reflex tears. Basal tears flow continuously to moisturize the eyes. When you blink, basal tears clean your eyes, making the eyes' outer surface smooth, and helping you see clearly.

Normally, you are not conscious of the flow of basal tears until your eyes get dry due to their absence. Reflex tears are the tears you shed in spite of yourself when, for instance, you slice a raw onion or encounter a cloud of dust. These tears help clear the eyes of such irritants as the gas from the onion or dust particles.

(C) When a tear is produced from the lacrimal gland, you blink in spite of yourself, spreading the tear as a film across your eye. (A) Your tear then has two fates. (B) First, it can drain down the tiny hole in the corner of the eye, like the sink plug in your kitchen, and then flow through your nose. (C) That is why your nose runs when you cry. (D) Second, when you are in a state of extreme sadness or pain, you have a really good cry, and your drainage system simply cannot deal with the volume of tears. (E)

14. 윗글 (C)의 흐름으로 보아 주어진 문장이 들어가 기에 가장 적절한 곳을 고르시오.

The excess fluid now flows over your eyelids and down your cheeks.

- (1) (A)
- (B)
- ③ (C)
- 4 (D)
- (E)

15. 윗글 (A)~(C)에 관한 내용으로 적절하지 <u>않은</u> 것을 두 개 고르시오.

- ① It is known that animals produce emotional tears like humans do.
- ② Dry eye happens when something goes wrong with tear production.
- 3 It is not only onions that can cause reflex tears.
- Basal tears are formed to wash away things that annoy you.
- (5) Blinking coats the eye with tears and sharpens your vision.

정답 및 해설

1) 정답 4

1등급 공략 Tip

[not A but B] 구문에서 B에 사용되는 동사를 기준으로 수 일치를 시킨다.

바로 잡기

@ 'A가 아니라 B'라는 뜻의 [not A but B]가 주어로 사용 되었을 때 B에 동사를 일치시키므로 단수 동사인 is를 사용 해야 한다. ⓑ 선행사가 toxic substances이기 때문에 관계 사 절 안의 동사도 복수형인 build를 사용해야 한다. @ and then 뒤에는 test subjects were이 생략되어 있다. 그 러므로 showing을 shown으로 바꿔야 한다.

2) 정답 ④

1등급 공략 Tip

지문에서 묘사하고 있는 눈물의 특성과 유사한 특성에 대해 서 말하고 있는 인물들을 고르면 된다.

바로 잡기

이 글에서 '눈물'은 다른 사람과의 유대를 위한 중요한 역할 을 하는 도구로 설명되었다. Zico과 Jiyeon이 설명하는 사 람들은 내향적인 사람들이므로 눈물의 역할과는 다르다.

3) 정답 ③

1등급 공략 Tip

맥락상 '천천히'라는 뜻의 slowly와 같은 단어가 사용되어야 한다.

바로 잡기

많은 단백질 함량은 끈적끈적한 특징 때문에 감정적 눈물이 사람의 얼굴에서 더 '천천히(slowly)' 내리도록 해준다. swiftly는 '신속히, 빨리'라는 뜻이므로 적절하지 않다.

4) 정답 (4)

1등급 공략 Tip

본문의 등장인물들을 정확히 구분하여 혼동하지 않도록 주 의한다.

바로 잡기

(B) 덴마크 과학자 닐스 스텐슨은 감정이 아니라 눈 한 모 퉁이에 있는 작은 기관인 눈물샘이 눈물의 참된 출처라는 사실을 밝혀냈다. 그가 스트레스로 인해 몸에 쌓인 독소를 눈물이 배출한다는 이론을 만들어 낸 것은 아니다.

5) 정답 ②

1등급 공략 Tip

본문의 문맥을 잘 파악하여 빈칸에 들어가는 적절한 문장을 알 수 있도록 한다.

바로 잡기

빈칸 앞 문장에서, '얼마간 시간이 지나자' 영화를 보고 '운 사람은 '영화를 보기 전보다 '기분이 더 나아졌다고' 하였다. 따라서 '몇몇 심리학자들은 사람들이 눈물을 흘릴 때, 얼마 시간이 지나고 나면 기분이 나아졌다고 믿었다'라고 하는 것

이 적절하다.

6) 정답 ①

1등급 공략 Tip

본문의 흐름을 잘 파악하여 요약문의 빈칸에 들어가는 적절 한 단어들을 찾아야 한다.

바로 잡기

요약문을 해석해 보면 '감정적 눈물은 타인들로 하여금 울고 있는 사람이 어려움을 겪고 있다고 (A)하게 만들며 사회적 유대나 인간적 유대가 그 사람을 도움으로써 (B)될 수 있다' 라는 뜻이므로 (A)에는 '알아차리다'라는 뜻의 recognize가, (B)에는 '강화되다'라는 뜻의 strengthened가 되는 것이 옳 다.

7) 정답 (5)

1등급 공략 Tip

주어진 문장에 나온 실험의 결과를 통해서 '우는 것은 사람 의 기분을 진정시킬 수는 있지만 그러기 위해서는 충분한 시간이 필요하다.'라는 것을 알 수 있다.

바로 잡기

- ① 울었다고 해서 항상 즉각적인 후회가 뒤따르는 것은 아 니다.
- ② 슬픈 영화를 보는 것도 즐거운 취미 중 하나다.
- ③ 고의로 사람을 울리는 것은 실험 윤리에 맞지 않다.
- ④ 기분은 여러 가지 주변 상황에 따라 바뀔 수 있다.
- 8) 정답 (5)

1등급 공략 Tip

밑줄 친 부분은 '눈물 흘리는 것에 문제를 가지고 있는 사 람들은 친구를 사귀거나 관계를 형성하는 데 있어서 어려움 을 겪는다.'는 내용이다.

바로 잡기

감정이 눈물에 영향을 주는 것과 반대되는 내용은 눈물이 감정에 영향을 주는 것이다. 그리고 다음 문장에서, 그 결과 눈물이 없는 사람들의 사회적 관계에 문제가 생기는 경향이 있다고 하였다. 따라서 '그 반대도 사실이다'라는 의미는 '눈 물을 흘리는 것에 문제가 있는 사람들은 친구를 사귀고 관 계를 만드는데 어려움을 겪는다.'라는 뜻이다.

9) 정답 ②

1등급 공략 Tip

문장에서 해당 단어가 핵심 동사로 사용되었는지 정확히 구 분하도록 한다.

바로 잡기

discovered는 주절의 핵심동사가 아닌 when이 이끄는 시간 부사절 내의 동사 역할을 한다.

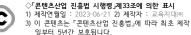
10) 정답 ⑤

1등급 공략 Tip

본문의 흐름을 잘 파악하여 보기의 문장이 어느 부분에 삽 입돼야 하는지 찾을 수 있도록 한다.

바로 잡기





주어진 문장은 '이것은 주변 환경에서 위험이나 기회를 포착하면 바로 행동을 취하게 하려는 우리 몸의 경고 시스템과 관계가 있다.'이다. 동공이 빛에 대해 기계적인 반응을 할뿐만 아니라 우리의 감정에 따라 조절되기도 한다는 내용뒤에 주어진 문장이 들어가고, 이에 대한 예가 이어지는 것이 자연스러우므로 ⑤번에 들어가는 것이 적절하다.

11) 정답 ③

1등급 공략 Tip

지문의 맥락을 파악하여 본문의 내용과 일치하지 않는 보기를 찾을 수 있도록 한다.

바로 잡기

③ 동공은 눈으로 들어오는 빛의 양을 조절하기 위해 자동적으로 확대되거나 수축되고, 이것은 동공의 광반응이다.

12) 정답 ⑤

1등급 공략 Tip

지문을 꼼꼼하게 읽고 지문에 나와 있지 않은 내용에 해당하는 보기를 고를 수 있어야 한다.

바로 잡기

⑤반사 눈물의 수막층은 기본눈물에 비해 더 두터운 것은 맞지만 모든 눈물의 종류 중 가장 두터운지는 알 수 없다.

13) 정답 ④

1등급 공략 Tip

지문 내 주요 사건/내용을 파악하여 일어난 순서대로 나열 할 수 있어야 한다.

바로 잡기

종류와 관계없이 눈물은 세 층으로 이루어져 있다. 안구에 직접 닿는 얇은 점막층, 가운데의 수막층, 그리고 표면에서 눈물의 증발을 막아주는 얇은 유막층이다. (D)흥미롭게도 과 학자들이 발견한 바에 따르면 눈물은 종류에 따라 화학적 성분이 다르다. 반사눈물의 수막층은 기본눈물에 비해 더 두 텁고 해로운 미생물을 막을 수 있는 더 높은 수준의 항체를 포함하고 있다. (B)반면 감정적 눈물을 더 많은 단백질을 포 함하고 있다. 그 이유에 대한 한 가지 설명은 단백질을 더 많이 포함한 내용물로 인해 감정적 눈물은 더 끈적끈적해지 고 그 결과 피부에 더 강하게 접착되어 얼굴에서 더 천천히 흘러내림으로써 다른 사람에게 보일 가능성을 높여준다는 것이다. (C)이 해석에 따르면 눈물이 눈에 더 잘 띌수록 보 는 사람의 동정심을 유발할 가능성이 높아진다. "진화론적으 로 볼 때, 어느 시기가 되자 눈물이 자동적으로 타인의 공감 과 동정을 유발하게 되는 수단이 되었을 것이다." 유니버시 티 칼리지 런던에 근무하는 의사 마이클 트림블은 이렇게 말한다.

14) 정답 ⑤

1등급 공략 Tip

본문 내용을 잘 파악하여 주어진 문장이 들어갈 알맞은 위 치를 고를 수 있어야 한다.

바로 잔기

주어진 문장은 '이때 넘쳐나는 눈물은 눈꺼풀 밖으로 나와 뺨을 타고 흘러내리게 된다.'이다. 주어진 문장 앞에는 눈물이 넘쳐나는 상황에 대해 나와 있어야 하므로 (ⓒ)에 들어가

는 것이 적절하다.

1등급 공략 Tip

15) 정답 ①, ④

①번과 ④번은 본문의 내용과 일치하지 않는 보기들이다.

바로 잡기

①감정으로 촉발된 눈물을 흘리는 생물은 현재까지 알려진 바로는 인간밖에 없다. ④가스나 먼지 입자와 같은 자극물 을 눈에서 씻어내도록 도와주는 것은 반사눈물이다.

