



2014학년도 경찰대학 1차시험 (영 어)

※ 총 8쪽 45문항(2점 35문항, 3점 10문항)입니다. 각 문항의 답을 하나만 고르시오.

※ [1-5] 글의 흐름으로 보아, 밑줄 친 단어의 뜻으로 가장 적절한 것을 고르시오.

1. An experimental method that would be deemed inappropriate for one kind of research may be the method of choice for another kind of research.

- ① proven ② coined ③ considered
- ④ classified ⑤ pronounced

2. The World Heritage site has been threatened by the country's civil war. Experts are wielding satellite technology to monitor and protect endangered museums, monuments and other places of historical importance.

- ① legalizing ② employing ③ developing
- ④ avoiding ⑤ clarifying

3. Unable to cope with the fact that he was diagnosed with colon cancer, Michael suspected his doctor of being a quack and decided to seek out a second opinion.

- ① clown ② demagogue ③ professional
- ④ charlatan ⑤ benefactor

4. Aristotle does not hector students with some piety against the desire for material goods. To him, concern for money is a good thing, and one of the good things is that people with money can exercise generosity.

- ① associate ② incite ③ criticize ④ appease ⑤ address

5. The boxing commentator remarked of the heavyweight champion, "His left hook is a real sockdolager. It would take a tank to withstand such impact."

- ① decisive blow ② powerful defense ③ sneaky attack
- ④ elusive punch ⑤ fragile delivery

6. (A), (B), (C)에 들어갈 말로 가장 적절한 것은?

There has been growing awareness in recent years of the inadequacy of GDP as a measure of true wealth, with its exclusive focus on economic capital formation but with no reference to other forms of capital—the health and biodiversity of the natural environs, the (A)[strength/weakness] of communities, and the well-being and happiness of people. A society should consciously develop its various forms of

capital in a (B)[less/more] balanced and integrated way. Societies have to substitute other forms of capital for economic wealth, demonstrating how quality of life could be maintained or even enhanced while significantly (C)[maximizing/reducing] consumption and material throughput.

- | | (A) | | (B) | | (C) |
|---|----------|---|------|---|------------|
| ① | strength | - | more | - | maximizing |
| ② | strength | - | less | - | reducing |
| ③ | strength | - | more | - | reducing |
| ④ | weakness | - | less | - | reducing |
| ⑤ | weakness | - | less | - | maximizing |

※ [7-9] 다음 글의 밑줄 친 부분 중, 문맥상 낱말의 쓰임이 적절하지 않은 것을 고르시오.

7. There is a constant demand for writers who can create good stories, especially for the big screen. However, there is an even greater ① supply of stories and screenplays that don't work and will never make it to the screen. In fact, there are over 100,000 scripts written every year, and only a few hundred actually make it. Even then, most of these movies do not ② succeed. Usually the script is the ③ culprit, and the most common script problem is lack of story. Believe it or not, ④ enormous attention is given to the process of developing good stories and screenplays for the big screen. But these statistics are startling proof of just how ⑤ easy it is to create a good story.

8. To different forms of rule ① corresponded different kinds of military organization. In medieval times, independent cities commonly created their own militias and ② obliged citizens to serve. Citizens never included all of the urban population, and often ③ narrowed to elected members of self-renewing councils. In the case of Venice and many other maritime cities, military duties ④ consisted of not only militia but also naval service. In manorial systems, landlords often ⑤ disbanded military units of their own vassals, tenants, and serfs, sometimes carrying on their own private wars, at other times joining an overlord's armies for a season of combat before returning to the country. [3점]

*manorial: 장원의, 영지의

9. Last year, American car buyers named fuel economy the most important consideration when shopping for a car, ① outranking even quality and safety. The change coincides nicely with the ② flood of hybrid and high-efficiency internal-combustion engines on the market. But as efficient as engines may be, they can't compensate for one glaring ③ efficiency: us. Poor driving habits can ④ slash fuel economy by as much as one-third. To ⑤ maximize it, engineers need to not only remake the cars; they need to remake the drivers.

※ [10-12] 밑줄 친 부분 중 어법상 틀린 것을 고르시오.

10. Insensitivity to pain is dangerous. People with a gene that ① inactivates pain axons suffer repeated injuries and generally fail to learn ② to avoid dangers. One boy with this condition performed street theater in Pakistan by thrusting a knife through his arm or ③ walking on burning coals. He ④ has died at age 14 by falling off a roof. Nevertheless, although we wouldn't want to eliminate pain, it ⑤ would be good to hold it under control.

11. Menno Aden is fascinated by the influence of architecture and design on spaces and the people who inhabit ① them. The 41-year-old artist has ② explored both the exteriors of residential developments and interiors of corporate buildings in his home city of Berlin, rearranging images of each into grids and panel mosaics, ③ occasionally transposing them into video works. But the inspiration for his recent project came from a photographic food diary, ④ which he shot his meals by standing on a chair and aiming his camera downward. This view put more emphasis on the space than the food, and he wondered ⑤ if he could capture an overhead view of an entire room. [3점]

12. One of the ① most contesting issues in using local land-use controls for environmental protection purposes is the "takings" problem. The Fifth Amendment to the U.S. Constitution contains the following language: "No person shall ② be deprived of life, liberty, or property, without due process of law; ③ nor shall private property be taken for a public use, without just compensation." This authorizes the government ④ to "take" private property, but only if it is for a public purpose and only if the owners receive just compensation. Land may be taken physically (e.g., for a public park or highway), and the main question will revolve around ⑤ how much the compensation should be. [3점]

13. 밑줄 친 it이 가리키는 대상이 다른 것은?

It started off like just any other winter day on the farm. But in the afternoon, all hell broke loose. The snow that had accumulated on the roof of the pig pen proved to be too much for it. The roof caved in and a heavy wooden beam trapped one of the baby pigs. The beam pinned ① it down and it couldn't move. When I arrived at the scene, ② it was squealing in pain. I tried to lift the beam off of ③ it but faced an unexpected obstacle. The mother pig was protecting the baby pig. It would not let anyone get near its offspring. Little did ④ it understand that I was just trying to help. Only when another farm hand restrained the mother with a rope was I able to reach the baby and set ⑤ it free.

14. Kevin Han에 관한 다음 글의 내용과 일치하는 것은?

Twenty-seven-year-old lawyer Kevin Han is frugal. Breakfast is 5 yuan (82 cents) for a cup of soybean milk and a hard-boiled egg. He has a 20-yuan lunch of white rice with small portions of meat and vegetables in the cafeteria at his workplace in Beijing. He spends the same for dinner. Han gets deals buying clothes online, lives in a cheap rental apartment, and takes the subway to work (4 yuan round-trip). Scrimping is a must if he's to buy his own place. He makes 13,000 yuan per month and saves about half. "My parents are not rich. So I have to save everything by myself."

- ① 저축하기 위해 아침을 거른다.
- ② 점심보다 비싼 저녁식사를 한다.
- ③ 온라인 의류 사업을 한다.
- ④ 매달 약 6,500 yuan을 저축한다.
- ⑤ 부유한 부모 밑에서 자랐다.

15. Ed Sheeran에 관한 다음 글의 내용과 일치하는 것은?

"I'm going to go home and watch TV," says Ed Sheeran after serenading a sold-out crowd at his Radio City Music Hall show. The 22-year-old Grammy-nominated singer-songwriter isn't concerned with being anything other than who he really is: the folk-pop rapper your parents might actually listen to. And so far, this refreshing approach seems to be getting him places. Don't believe us? Ask his 6.5-plus million Twitter followers and the thousands of screaming girls who show up at countless concerts simply to see him. Some think Ed is an overnight music sensation, but the Halifax, England native grew up in an artistic home where his love of music was nurtured at a young age.

- ① 관중들에게 노래하기 전에 TV를 시청할 거라고 말했다.
- ② Grammy상 후보가 되는 것 말고는 관심이 없다.
- ③ 6천 5백 만 명 이상의 Twitter follower가 있다.
- ④ 아무도 그가 하루 밤 사이에 성공했다고 믿지 않는다.
- ⑤ England 출신으로 예술적 가정 분위기에서 자랐다.

16. Pete Bodharamik에 관한 다음 글의 내용과 일치하지 않는 것은?

Five years ago Pete Bodharamik was a 35-year-old with a big challenge. He had just taken over Jasmine International, the telecom holding company his father had started back in 1982. It was going through rough times, emerging from years in bankruptcy court after his father had diversified on borrowed money in the 1990s. And expectations weren't high that Pete was the one to turn things around. But Pete had spent his time delving into content for new forms of media and pursuing his love of pop culture and entertainment. He invested heavily in expanding Jasmine's limited broadband network in the provinces far from Bangkok, where there was little competition. He fed those big pipes with movies, television shows, music videos, games and other rich content, sometimes produced by the media company he had started.

- ① 부친이 시작한 회사를 인수했다.
- ② 부친은 돈을 빌려 사업을 다양화했다.
- ③ 대중문화에 대한 애정을 버리지 않았다.
- ④ Bangkok 시내 지역에 투자를 집중했다.
- ⑤ 자기가 시작한 회사가 콘텐츠를 생산하기도 했다.

17. Sousa에 관한 다음 글의 내용과 일치하지 않는 것은?

John Philip Sousa started his music education by playing the violin at the age of six. At the age of thirteen, his father, a trombonist in the Marine Band, enlisted Sousa in the U.S. Marine Corps as an apprentice. Several years after serving his apprenticeship, Sousa joined a theatrical orchestra where he learned to conduct. The marching brass bass, or sousaphone, was created in 1893 by J. W. Pepper, a Philadelphia instrument maker, with several of Sousa's suggestions in its design. He organized the Sousa Band the year he left the Marine Band. The band played both in America and around the world, including at the World Exposition in Paris. Sousa passed away from a heart attack at the age of 77 in Pennsylvania. He had conducted a rehearsal of "The Stars and Stripes Forever" the previous day with the Ringgold Band. He was posthumously enshrined in the Hall of Fame for Great Americans in 1976.

- ① 어릴 때 바이올린을 연주하였으며, 아버지는 미 해병대 밴드의 트롬본 연주자였다.
- ② 미 해병대 실습생 생활을 마치고, 극장 오케스트라 단원이 되었고, 거기서 지휘를 배웠다.
- ③ 필라델피아 악기제작자 J. W. Pepper의 제안으로 sousaphone을 만들었다.
- ④ 그의 Sousa Band는 파리 세계 엑스포에서도 연주하였다.
- ⑤ 심장 마비로 갑자기 죽은 후, 명예의 전당의 일원이 되었다.

※ [18-22] 다음 글을 읽고, 빈칸에 들어갈 말로 가장 적절한 것을 고르시오.

18. Perhaps the greatest trap ever set for the human race was the coining of the phrase, "Having it all." Banded about in speeches, headlines, and articles, these three words are intended to be aspirational but instead make all of us feel like we have fallen short. I have never met a person who has stated emphatically, "Yes, I have it all." Because no matter what any of us has, no one has it all. The antiquated rhetoric of "having it all" disregards the basis of every economic relationship: _____. All of us are dealing with the constrained optimization that is life, attempting to maximize our utility based on parameters like career, kids, and relationships, doing our best to allocate the resource of time. Due to the scarcity of this resource, therefore, none of us can "have it all," and those who claim to are most likely lying. [3점]

- ① the idea of trade-offs
- ② the pursuit of happiness
- ③ the notion of absolute wealth
- ④ the belief of equal distribution
- ⑤ the law of supply and demand

19. Discussions of ecological sustainability typically focus on greenhouse gas emissions, bio-diversity, and other measurements of the natural world. They include economic and social trends in production or population. But they rarely feature time use. Yet patterns of human time use are key drivers of ecological outcomes. People combine time, money, and natural resources to carry out their daily lives and activities. Firms combine time, physical capital, and natural capital to create production. To a great extent, time and natural resources are substitutes for each other: doing things faster usually takes a greater toll on Earth. So _____ tend to have heavier ecological footprints and greater per capita energy use.

- ① misconceptions about time and money
- ② time-stressed households and societies
- ③ temporal constraints on resource development
- ④ time-honored notions of sustainable environments
- ⑤ cases where recycling resources takes greater time

20. Plato in his *Republic* criticizes the poets for corrupting the young. Also, he says that an ideal republic controls music even more tightly than it controls poetry and plays. Musical rhythms, Plato remarks, have great capacity to "insinuate themselves into the inmost part of the soul." Sometimes this is for the good, as when music softens the disposition of a citizen made too rough by time in the gymnasium. But at other times, taste in music threatens the moderation we seek in spirit and sets ferocity on fire. _____ if the republic is to train its young citizens well. [3점]

*insinuate: (사상 등을) 은근히 심어 주다

- ① Aesthetics must defer to politics
- ② Gymnastics must accompany poetics

- ③ Moderation must yield to military ferocity
- ④ Individual taste must prevail over common good
- ⑤ Citizens must not be indulged in one kind of music

21. I adore riding fast. I love descending in the drops and turns as if I've escaped the bounds of gravity. Though in pictures I might resemble a bike racer, I am the proud owner of ordinary mitochondria, although that does not stop me from occasionally trying to go as quickly as I can. I discover something significant about myself when I push myself that hard. I equally adore riding slow. When I sit upright and spin, I see the world and feel energized and connected to my community. I feel more complete as a cyclist when I pedal to the farmer's market in jeans or meander through the countryside. I am truly _____.

- ① on track to be a racer ② moved by my own body
- ③ in love with my saddle ④ convinced of my territory
- ⑤ at ease with my storytelling

22. Exactly how a gene increases the probability of a given behavior is a complex issue. Some genes control brain chemicals, but others affect behavior indirectly. Suppose your genes make you unusually attractive. As a result, strangers smile at you and many people want to get to know you. Their reactions to your appearance may change your personality, and if so, the genes altered your behavior by altering your environment. For another example, imagine a child born with genes promoting greater than average height, running speed, and coordination. The child shows early success at basketball, and soon spends more and more time playing basketball. Soon the child spends less time on other pursuits—watching television, playing chess, or collecting stamps. Thus the measured heritability of many behaviors might depend partly on genes that affect leg muscles. This is a hypothetical example, but it illustrates the point: _____ [3점]

- ① Success depends heavily on genetic formulas
- ② Genes influence behavior in roundabout ways
- ③ Personality is a matter of genes and behavior
- ④ Environmental adaptation is the key to evolution
- ⑤ Natural selection is stimulated by behavioral cues

23. 빈칸 (A)와 (B)에 들어갈 말로 가장 적절한 것은?

Earth's upper atmosphere—below freezing, nearly without oxygen, flooded by UV radiation—is no place to live. But last winter, scientists from the Georgia Institute of Technology discovered that billions of bacteria actually (A) up there. Expecting only a smattering of microorganisms, the researchers flew six miles above Earth's surface in a NASA jet plane. There, they pumped outside air through a filter to collect particles. Back on the ground, they tallied the organisms, and the count was staggering: 20 percent of what

they had assumed to be just (B) or other particles was alive. Earth, it seems, is surrounded by a bubble of bacteria.

- | (A) | (B) |
|----------------|------------------|
| ① thrive | - dust |
| ② thrive | - cells |
| ③ thrive | - germs |
| ④ disintegrate | - radiation |
| ⑤ disintegrate | - microorganisms |

※ [24-25] 다음 글의 제목으로 가장 적절한 것을 고르시오.

24. When billionaires turn to philanthropy after making their fortune, they often fund scholarships for poor students, work to improve health care, or contribute to the arts. Chang Yung-Fa's mission is nothing less than to "reorganize" social values. Five years ago he started a cartoon-illustrated magazine, *Morals*, that each month seeks to uplift people's sense of morality in Taiwan and around the world. Whether he's making money or giving away money, morality underpins much of what the 85-year-old Chang does. He believes that his Evergreen Group—which includes the world's fourth-largest container shipping company, hotels, EVA Airways and long-distance buses to the island's main airport—prosperes largely because of congenial staff relations backed by the company culture of morality.

- ① Bothered Philanthropist in Taiwan
- ② Higher Morality, Greater Happiness
- ③ Instilling Morality in Taiwanese Companies
- ④ Entrepreneur Turned Morality Missionary
- ⑤ Business and Morality: Like Oil and Water

25. Perhaps the scientists most excited about reigniting the lunar program are not lunar specialists, but astronomers studying a wide range of subjects. Such scientists would like new missions to install a huge telescope with a diameter of 30 meters on the far side of the moon. Two things that a telescope needs for optimum operation are extreme cold and very little vibration. Temperatures on the moon can be as frigid as 200 degrees Celsius below zero in craters on the dark side. Because there is no seismic activity, the moon is a steady base. Permanent darkness means the telescope can be in constant use. Proponents claim that under these conditions a lunar-based telescope could accomplish as much in seventeen days as the replacement for the Hubble telescope will in ten years. [3점]

* seismic:

진동의

- ① Lunar Program: Once in a Blue Moon
- ② The Case for a Lunar Space Observatory
- ③ Moon Exploration: One Small Step for Mankind
- ④ The New Hubble Telescope: Is It Worth It?

⑤ Lunar Specialists vs. General Astronomers

※ [26-27] 다음 글의 주제로 가장 적절한 것을 고르시오.

26. The belief that optimism can keep you alive — or at least stave off cancer — gained traction after the release of a study on recovering breast-cancer patients in the *Lancet* medical journal in 1979. Since then, it has become a household idea that patients with a “fighting spirit” fare better than those with feelings of hopelessness. However, a few recent large-scale meta-analyses have found a lack of convincing evidence that optimism really extends the lives of cancer patients. Despite the lack of definitive data, the belief in the power of positive thinking has become so widespread that it might actually be doing harm. Cancer patients may feel inclined to act upbeat even when they are distraught, hide their despair instead of seeking solace or treatment, or blame themselves if their disease progresses.

- ① the dangers of hopelessness for cancer recovery
- ② the necessity of optimism for recovering patients
- ③ the downfalls of positive thinking for cancer patients
- ④ the importance of a sound doctor-patient relationship
- ⑤ the discovery of new preventative measures for cancer

27. Aristarchus of the Aegean island of Samos first suggested that the earth and the other planets moved about the sun — an idea that was rejected by astronomers until Copernicus proposed it again 2,000 years later. After Copernicus, the Danish astronomer Tycho Brahe watched the motions of the planet Mars from his observatory on the Baltic island of Hveen; as a result Johannes Kepler was able to show that Mars and the earth and the other planets move in ellipses about the sun. Then Isaac Newton proposed his universal law of gravitation and laws of motion, and from these it was possible to derive an exact description of the entire solar system. This occupied the minds of some of the greatest scientists and mathematicians in the centuries that followed.

*ellipse: 타원

- ① human endeavors to understand the solar system
- ② distortions of the solar system by ancient scientists
- ③ superstitions about the solar system in ancient times
- ④ history of pre-Newtonian physical laws and principles
- ⑤ some newly discovered information about planet movements

28. 다음 글의 요지로 가장 적절한 것은?

In commercial society based upon exchange, every man “becomes in some measure a merchant.” The pursuit of self-interest in the market, with its division of labor and his resulting dependence on others, leads him to adapt his behavior to the expectations of others. The market itself is therefore a disciplining institution. “The real and effectual discipline which is exercised over a workman, is not that of his corporation,” Adam Smith wrote, “but that of his customers. It is the fear of losing their employment which

restrains his frauds and corrects his negligence.” In order to become successful in his economic exchanges with others, the individual is led to develop the moderate level of self-command which Smith calls “propriety.” The character that the market promotes includes prudence and the ability to defer short-term gratification for long-term benefits.

- ① 시장에서의 개인의 경제 활동은 자기훈육을 가져오게 된다.
- ② 개인의 이득추구는 자기조절에 의해 절제되어야 한다.
- ③ 노동자는 동료 노동자보다 고객에게 더 관심을 가져야 한다.
- ④ 개인은 지속적인 이득을 위해 즉각적인 만족을 희생해야 한다.
- ⑤ 시장에서의 개인 활동은 분업과 타인에의 의존을 바탕으로 한다.

29. 다음 글의 주장으로 가장 적절한 것은?

Purported to treat a variety of ailments, from fevers to measles to epilepsy, rhinoceros horns have been prized ingredients in Chinese medicines for thousands of years. Sought after for their horns, white rhinos saw their population fall to 100 animals in South Africa by 1910. Today, despite a 1977 ban on the selling of rhino parts, Africa’s rhinos once again are facing extinction. Since the ban has not been able to protect the rhinos from illegal poaching, ironically, legalizing a highly regulated trade in rhino horns can end up saving the animals. Rhino horns can be cut or shaved without injuring the animals, and they grow back. If tightly controlled by a single centralized organization, the current demand can be satisfied through legal horn cuttings, along with stockpiles of confiscated black-market horns and those collected from rhinos that die naturally.

- ① Rhino horns should be considered as an alternative to conventional medicine.
- ② Legalizing and regulating the trade of rhino horns can save the rhinos.
- ③ The government must strictly enforce the penalties of illegal poaching.
- ④ Confiscated black-market rhino horns need to be put to better use.
- ⑤ Cutting the horns of rhinos is inhumane and should be abolished.

30. 다음 글의 상황에 나타난 분위기로 가장 적절한 것은?

It was just another dog day of summer. The sun was shining down brightly but Jake was in the comfort of the shade in his backyard. He had a glass of iced tea in his right hand and a good read in his left. Jake was without a single care in the world. Today, he was just going to sit around and vegetate until dusk. His playful puppy was playing with a ball. She looked at Jake as if to invite him to a game of fetch. But he would not oblige her today. Only an earthquake of 10 points on the Richter scale could drive him from his snug nest.

- ① bored ② relaxed ③ nervous ④ surprised ⑤ playful

※ [31-32] 다음 글에서 전체 흐름과 관계 없는 문장을 고르시오.

31. Thanks to advances in cell cultivation, researchers are closer than ever to growing real, edible meat in labs. Beyond the ethics of raising some 9 billion animals to be killed for food each year in the U.S., factory farms produce vast amounts of waste. ① Scientists are working to come up with efficient ways to recycle this waste. ② The 2 trillion pounds of animal waste pollutes the air and water. ③ Besides the pollution problem, the global demand for meat is expected to grow 60% by 2050, and the amount of farmland and grain needed to feed those chickens, pigs, and cows may be unsustainable. ④ But producing in vitro meat — muscle tissue that is cultured from animal cells and grown in a laboratory — has none of those hang-ups. ⑤ In fact, it's mouthwateringly efficient compared with existing methods of meat production, using 45% less energy and 99% less land. [3점] *hang-up: 고민, 곤란

32. An infant's lack of sparkling dialogue may obscure the fact that we are all born with an ability to communicate. ① A capacity for language exists in our tiny, screaming bodies in the delivery room, along with our eyes, ears, arms, legs, and vital organs. ② The capacity must be stimulated — we need to hear people talk in order to form words — but we are born eager to speak. ③ The newborn baby is patiently waiting for answers to questions: "What will I call the objects that surround me? How will I form positive and negative sentences? How can I express feelings about objects and people?" ④ Only when the baby is able to clearly articulate such questions, do the parents initiate communication. ⑤ The child's brain instinctively searches for answers to these questions and then, like a sponge, soaks them up.

33. 글의 흐름으로 보아, 주어진 문장이 들어가기에 가장 적절한 곳은?

Who's going to take care of all of those people?

For a country that has managed to outspend every other developed nation in the world on health care, the U.S. is oddly short on doctors. ① We have about 30 primary-care physicians per 100,000 people. ② That is far fewer than any other industrialized country. ③ You may have seen the headlines about U.S. physician shortages and how they're posed to get even worse, with baby boomers entering retirement. ④ This is only worsened by the millions of previously uninsured people about to enter the health care system. ⑤ The most viable solution is a growing population of nurses and other clinicians who have obtained advanced and academic training and are licensed to do many of the same things as physicians.

34. 다음 글의 내용을 한 문장으로 나타낼 때, 빈칸 (A)와 (B)에 들어갈 말로 가장 적절한 것은?

For hundreds of years in Europe, religious art was almost the only type of art that existed. Churches and other religious buildings were filled with paintings that depicted people and stories from the Bible. Although most people couldn't read, they could still understand biblical stories in the pictures on church walls. By contrast, one of the main characteristics of art in the Middle East was its absence of human and animal images. By Islamic law, artists are not allowed to copy human or animal figures except on small items for daily use such as rugs and bowls. Thus, on palaces, mosques, and other buildings, Islamic artists have created exclusive arabesques — decoration of great beauty with shapes such as circles, squares, and triangles.

European art differed from Middle Eastern art in that the former contained (A) images, whereas the latter used (B) patterns.

- | (A) | | (B) |
|-------------|---|-------------|
| ① sacred | - | animal |
| ② secular | - | non-secular |
| ③ religious | - | circular |
| ④ plain | - | exquisite |
| ⑤ biblical | - | geometric |

35. 주어진 글 다음에 이어질 글의 순서로 가장 적절한 것은? [3점]

Judging by the moon, I knew it was almost four weeks since I had been trapped by the snowstorm. I had stopped counting days on January 6, because on that day my prospects had suddenly taken a turn for the worse.

(A) Blustering clouds engulfed my mountainside in snow, quickly undoing all the good works of the sun. Still, I had made some progress during the sunny spell.

(B) The sensation of cool water trickling down my throat felt so good that I almost became addicted to it. I anticipated the small pleasure for hours beforehand.

(C) I discovered that if I compacted snow into balls of ice and set them in the sun, water would drip off the bottom for drinking. This was much easier than melting snow or ice in my mouth. Melting snowballs became a part of my daily ritual.

- ① (A)-(B)-(C) ② (A)-(C)-(B) ③ (B)-(A)-(C)
 ④ (B)-(C)-(A) ⑤ (C)-(A)-(B)

※ [36-37] 다음 글을 읽고 물음에 답하시오.

Near-Earth Objects (NEOs) is a contemporary term for massive objects that periodically cross Earth's orbit, and in doing so come close to our planet. They include asteroids, meteoroids, and comets. (A) Almost all asteroids are confined to the asteroid belt, situated between Mars and Jupiter. It is estimated that more than a thousand asteroids are at least a

mile wide. (B) Perhaps a dozen are three or more miles wide. There is no lower limit to asteroid size because they grade down to tiny rocks and particles of dust, but no asteroid is big enough to hold an atmosphere. What produced the asteroids? Isaac Asimov posed the once popular science fiction idea that asteroids are remnants of a small planet whose inhabitants discovered nuclear energy and blew their world to tiny pieces of fragments. (C) But not even a nuclear explosion would be great enough to form the asteroid belt. The prevailing scientific view is that asteroids are material that failed to combine into a planet. (D) One of the recent appearances of the massive NEO was its 1908 crash in Siberia. (E) Earth is spotted with dozens of visible craters that testify to similar impacts. It is widely believed that the impact of a giant NEO caused a mass extinction of life that included the dinosaurs, 65 million years ago.

36. 다음 문장이 들어가기에 가장 적절한 곳은?

It flattened trees for many miles around and killed a herd of reindeer.

- ① (A) ② (B) ③ (C) ④ (D) ⑤ (E)

37. asteroids에 관한 위 글의 내용과 일치하는 것은?

- ① 대기권을 형성할 수 있을 만큼 큰 것도 있다.
- ② 핵폭발로 인해 발생했다는 생각이 한때 유행했다.
- ③ 행성으로 만들어지기 쉬운 물질로 이루어져 있다.
- ④ 일반적으로 지구에 떨어지면 높은 언덕을 만든다.
- ⑤ 1908년에 처음 발생한 것으로 알려져 있다.

※ [38-39] 다음 글을 읽고 물음에 답하십시오.

Two historical facts highlight a fundamental problem that needs to be addressed in the area of computer security. First, all complex software systems have eventually revealed flaws or bugs that subsequently needed to be fixed. Second, it is extraordinarily difficult to build a computer hardware/software system that is not vulnerable to a variety of security attacks. An illustration of this difficulty is the Windows NT operating system (OS), introduced by Microsoft in the early 1990s. Windows NT was promised to have a high degree of security. Sadly, Windows NT did not deliver on this promise. This OS and its successor Windows versions have been _____.

Problems to do with providing strong computer security involved both design and implementation. It is difficult, in designing any hardware or software module, to be assured that the design does in fact provide the level of security that was intended. This difficulty results in many unanticipated security vulnerabilities. Even if the design is in some sense correct, it is difficult, if not impossible, to implement the design without errors or bugs, providing yet another host of vulnerabilities.

38. 위 글의 주제로 가장 적절한 것은?

- ① finding solutions to design and implementation problems
- ② building secure computer programming companies
- ③ difficulty of building secure computer systems
- ④ responsibilities of bug-free software developers
- ⑤ requirements for installing a new hardware system

39. 위 글의 빈칸에 들어가기에 가장 적절한 것은?

- ① recently stabilized after numerous trial and error
- ② constantly updated to outperform their predecessors
- ③ unduly promoted and sold to over ten million consumers
- ④ erroneously recognized by software developers as the strongest
- ⑤ chronically plagued with a wide range of security vulnerabilities

※ [40-42] 다음 글을 읽고 물음에 답하십시오.

Like many stories, certain details of who or what the Bell Witch was vary from version to version. The prevailing account is that it was (A) the ghost of a woman named Kate Batts, a mean old neighbor of John Bell. Batts believed Bell cheated her in a land purchase and on her deathbed she swore that she would haunt John Bell and his family. This version appears in a Tennessee guidebook published in 1933:

“Sure enough, the Bells were tormented for years by the malicious spirit of Old Kate Batts. John Bell and his daughter Betsy were the principal targets. Toward the other members of the family the witch was either indifferent or, as in the case of Mrs. Bell, friendly. No one ever saw (B) her, but every visitor to the Bell home heard her all too well. The spirit of Old Kate led John and Betsy Bell on a merry chase. She threw furniture and dishes at them. She pulled their noses, yanked their hair, poked needles into them. She yelled all night to keep them from sleeping, and snatched food from their mouths at mealtimes.”

News of the Bell Witch spread quickly. When word of the haunting reached Nashville, one of its most famous citizens, General Andrew Jackson, decided to gather a group of friends to investigate it. The future president of the U.S. wanted to either expose it as a hoax or send (C) the spirit away. Jackson and his men were traveling when suddenly the wagon stopped. The men pushed and pushed, but the wagon could not be moved. Then came the sound of a voice from the bushes saying, “All right general, let the wagon move on. I will see you tonight.” The astonished men could not find the source of the voice. The horses then unexpectedly started walking on their own and the wagon moved along again. Jackson indeed encountered (D) the witch that night and left early the next morning, claiming he would rather fight the British than the Bell Witch.

A few explanations of the Bell Witch phenomena have been offered over the years. One is that the haunting was a hoax created by Richard Powell, the schoolteacher of Betsy

Bell and Joshua Gardner, the boy with whom Betsy was in love. It seems Powell was deeply in love with Betsy and would do anything to destroy (E) her relationship with Gardner. Through a variety of tricks, it is believed that Powell created all of the ghostly effects to scare Gardner away. In fact, Gardner eventually did break up with Betsy and left the area. It has never been satisfactorily explained, however, how Powell achieved all the effects. But Powell did come out the winner. In the end, he married Betsy Bell.

40. 위 글의 제목으로 가장 적절한 것은?

- ① Story Behind the Bell Witch
- ② Watch Out for a Witch's Tricks
- ③ Don't Fall in Love with a Witch
- ④ General Jackson's Unsuccessful Witch Hunt
- ⑤ Invention of Witchcraft in the American South

41. 밑줄 친 부분 중 가리키는 대상이 다른 것은?

- ① (A) ② (B) ③ (C) ④ (D) ⑤ (E)

42. 위 글의 내용과 일치하지 않는 것은?

- ① Bell Witch는 Mrs. Bell에게는 우호적이었다.
- ② Bell Witch는 가구를 던지고 머리카락을 잡아당기기도 했다.
- ③ Andrew Jackson 장군은 후에 대통령이 되었다.
- ④ Andrew Jackson은 영국과 싸우기 위해 남부에서의 전투를 중지하였다.
- ⑤ Powell은 Betsy와 결혼하는 데 성공했다.

※ [43-45] 다음 글을 읽고 물음에 답하시오.

(가) I first heard about Veranda Beach on my grandparents' porch the summer I was 13. It was a lazy night that left the hills a smoky blue and the air heavy with the smell of rain. The last shadows were melting into dusk as conversation turned to the summer ahead.

(나) Well, summer passed, and with age came wisdom. I realized the front porch was no enemy to adventure. It was a window on the world and a lesson in how that world works. What's more, the love affair continues to this day — with new lessons adding to the old. On my family's porch, I learned about life and love, hopes and dreams, and promises and trust. One day it was the front door to Tara, as my sister and I assumed awful Southern accents and scouted the horizon for Rhett Butler. The next day it was a castle fortress or a ship at sea. For the adults, lighthearted bantering and games of checkers were (A) ; talk about taxes and checkbooks was not. The veranda was a place to enjoy the little things. Life was slower there.

(다) Now, more than a few verandas later, I have become a connoisseur of the porch. This summer I am spending time perched on a porch rail, trading stories with my children. As I watch a new generation write their names in the sweat of a lemonade pitcher, I hope they, too, are learning the lessons of Veranda Beach. Be strong against the wind. Be colorful and imaginative — grow in

unexpected ways. Watch for the shooting stars. Above all, know that sometimes it's better to have a place to be yourself than to have a place to go.

(라) "Any plans?" my grandfather asked. Tipping his chair back, my father answered, "Just Veranda Beach." They all chuckled. My heart pounded. Veranda Beach? Where was it? When would we go? "Why, you're there already," my father teased. There was a gentle chorus of laughter as they told me the awful truth. Veranda Beach was the front porch. We were going nowhere. My adolescent spirits (B). What did they see in that boring porch? Didn't they know the grass was surely greener in some distant place? *connoisseur: 감식가, 전문가

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

- ① (나)-(다)-(라) ② (나)-(라)-(다) ③ (다)-(나)-(라)
- ④ (다)-(라)-(나) ⑤ (라)-(나)-(다)

44. 위 글의 제목으로 가장 적절한 것은?

- ① The Gentle Chorus in the Front Porch
- ② The Greener Grass in My Front Yard
- ③ Veranda Beach: The Place to Be Yourself
- ④ The Memory Never Gone with the Wind
- ⑤ Life's Lesson: Getting Older, but Wiser

45. 위 글의 빈칸 (A), (B)에 들어갈 말로 가장 적절한 것은? [3점]

- | | | |
|---|-------------|-----------|
| | (A) | (B) |
| ① | encouraged | - plunged |
| ② | discredited | - plunged |
| ③ | explored | - arose |
| ④ | favored | - arose |
| ⑤ | altered | - drooped |

※ 확인사항

▷ 답안지의 해당란에 필요한 내용을 정확히 기입·표기했는지 확인하시오.



2014학년도 경찰대학 1차시험 (수 학)

※ 총 4쪽 25문항입니다.

[1~20] 각 문항의 답을 하나만 고르시오.

1. 영행렬이 아닌 2×1 행렬 X 에 대하여 등식 $\begin{pmatrix} 1 & 4 \\ 1 & 1 \end{pmatrix} X = kX$ 를 만족시키는 실수 k 의 최댓값은? [3점]
- ① -3 ② -1 ③ 1 ④ 3 ⑤ 5

2. 꼭짓점의 집합이 $V = \{2, 3, 4, 6, 12\}$ 이고, 변의 집합이 $E = \{A_i A_j \mid A_i \text{는 } A_j \text{의 약수이거나 배수, } A_i, A_j \in V, i \neq j\}$ 인 그래프에 대하여, 각 꼭짓점 사이의 연결 관계를 나타내는 행렬의 모든 성분의 합은? [3점]
- ① 10 ② 12 ③ 14 ④ 16 ⑤ 18

3. 등식 $\sum_{n=2}^{\infty} (1+c)^{-n} = 2$ 를 만족시키는 상수 c 에 대하여 $2c+1$ 의 값은? [3점]
- ① $-\sqrt{3}$ ② $-\sqrt{2}$ ③ $\sqrt{2}$ ④ $\sqrt{3}$ ⑤ 2

4. 삼차함수 $f(x)$ 에 대하여 $\lim_{x \rightarrow 1} \frac{f(x)}{(x-1)^2} = 5, \lim_{x \rightarrow 2} \frac{f(x)-k}{x-2} = 13$ 일 때, 상수 k 의 값은? [3점]
- ① 6 ② 7 ③ 8 ④ 9 ⑤ 10

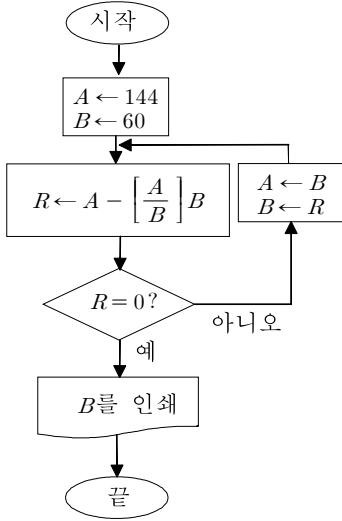
5. 청소년 가장 가정을 돕기 위해 경찰청에서 기획한 수박판매행사에 사용된 수박의 무게는 표준편차 1kg인 정규분포를 따른다고 한다. 이 수박들 중에서 49개의 수박을 임의추출하여 무게를 조사해보니 평균 9kg이었다. 이 행사에 사용된 수박의 모평균 m (kg)을 신뢰도 95%로 추정할 때의 신뢰구간은 $a \leq m \leq b$ 이다. 이때 $b-a$ 의 값은? (단, $P(|Z| \leq 2) = 0.95$) [4점]
- ① $\frac{4}{7}$ ② $\frac{6}{7}$ ③ $\frac{8}{7}$ ④ $\frac{10}{7}$ ⑤ $\frac{12}{7}$

6. 7개의 문자 a, b, c, d, e, f, g 중에서 중복을 허락하여 3개를 선택하여 문자열을 만들 때, 문자열이 e 를 반드시 포함할 확률은? [4점]
- ① $\frac{121}{343}$ ② $\frac{123}{343}$ ③ $\frac{125}{343}$ ④ $\frac{127}{343}$ ⑤ $\frac{129}{343}$

7. 함수 $y = a \cos^2 x + a \sin x + b$ 의 최댓값이 10이고 최솟값이 1일 때, 실수 a, b 의 곱 ab 의 값은 p 또는 q 이다. $p+q$ 의 값은? [4점]
- ① -4 ② -2 ③ 2 ④ 4 ⑤ 6

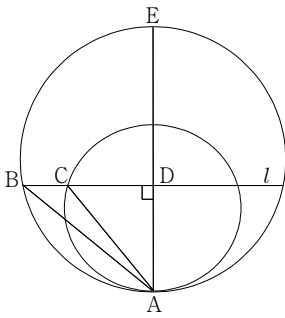
8. 이차방정식 $x^2 - x - 1 = 0$ 의 두 근을 α, β 라 할 때, $\alpha^{11} + \beta^{11}$ 의 값은? [4점]
- ① 123 ② 144 ③ 150 ④ 175 ⑤ 199

9. 다음 순서도에서 인쇄되는 B의 값은? (단, $[x]$ 는 x 보다 크지 않은 최대의 정수이다.) [4점]



- ① 4 ② 8 ③ 12 ④ 16 ⑤ 20

10. 반지름의 길이가 각각 5와 3인 두 원이 점 A에서 내접할 때, 그림과 같이 큰 원의 지름 AE에 수직인 직선 l 이 두 원과 만나는 점을 각각 B와 C라 하자. $\overline{AD} = 4$ 일 때, 삼각형 ABC의 외접원의 반지름의 길이는? [4점]



- ① $\sqrt{12}$ ② $\sqrt{15}$ ③ $\sqrt{20}$ ④ 5 ⑤ $\sqrt{30}$

11. 실수 x 에 대하여 $\frac{8x+8}{x^2+4}$ 의 최댓값을 M , 최솟값을 m 이라 할 때, $M-m$ 의 값은? [4점]

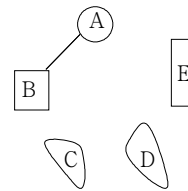
- ① 2 ② $2\sqrt{2}$ ③ $2\sqrt{3}$ ④ 4 ⑤ $2\sqrt{5}$

12. 그림과 같이 자연수 1, 2, 3, 4, ...를 나선 모양으로 차례로 적을 때, 1000과 이웃한 8개의 수 중에서 가장 작은 것은? [4점]

	17	16	15	14	13
	18	5	4	3	12
	19	6	1	2	11
	20	7	8	9	10
	21	22

- ① 868 ② 872 ③ 876 ④ 880 ⑤ 884

13. 그림과 같이 5개의 점 A, B, C, D, E가 있다. 이미 A, B가 다리로 연결되어 있을 때, 점과 점을 연결하는 3개의 다리를 더 건설하여 5개의 점을 모두 다리로 연결하는 방법의 수는? [4점]



- ① 48 ② 50 ③ 52 ④ 54 ⑤ 56

14. 좌표평면 위의 점 $P\left(\frac{1}{2}, -2\right)$ 에서 곡선 $y=x^2$ 에 그은 두 접선을 l, m 이라 할 때, 두 접선 l, m 과 곡선 $y=x^2$ 으로 둘러싸인 부분의 넓이는? [4점]

- ① $\frac{3}{2}$ ② $\frac{7}{4}$ ③ $\frac{1}{2}$ ④ $\frac{9}{4}$ ⑤ $\frac{5}{2}$

15. 함수 $f(x) = \begin{cases} 1-|x| & (|x| \leq 1) \\ 0 & (|x| > 1) \end{cases}$ 에 대하여 $\sum_{n=1}^{10} \int_{-n}^n \frac{\{f(x)\}^n}{n} dx$ 의 값은? [4점]

- ① $\frac{12}{11}$ ② $\frac{14}{11}$ ③ $\frac{16}{11}$ ④ $\frac{18}{11}$ ⑤ $\frac{20}{11}$

16. 첫째항이 3인 등차수열 $\{a_n\}$ 에 대하여 $a_{10} - a_2 = 4$ 일 때,

$\sum_{n=1}^{\infty} \frac{1}{a_n a_{n+1} a_{n+2}}$ 의 값은? [4점]

- ① $\frac{1}{21}$ ② $\frac{2}{21}$ ③ $\frac{1}{7}$ ④ $\frac{4}{21}$ ⑤ $\frac{5}{21}$

17. 두 수열 $\{a_n\}, \{b_n\}$ 의 일반항이 각각 $a_n = \left(\frac{1}{2}\right)^{n-1}$ 과

$b_n = 2\left(\frac{1}{3}\right)^{n-1}$ 일 때, $\sum_{n=1}^{\infty} \left(\sum_{k=1}^n a_k b_{n-k+1}\right)$ 의 값은? [5점]

- ① 6 ② 8 ③ 9 ④ 10 ⑤ 12

18. $2x - y = 2$ 를 만족시키는 실수 x, y 에 대하여 다음 식의 최솟값은? [5점]

$$\sqrt{x^2 + (y+1)^2} + \sqrt{x^2 + (y-3)^2}$$

- ① 4 ② $2\sqrt{5}$ ③ $2\sqrt{6}$ ④ $2\sqrt{7}$ ⑤ $4\sqrt{2}$

19. 일어날 확률이 $p (p \neq 0)$ 인 사건이 일어날 때 놀람의 정도를 $S(p)$ 라 하면 관계식

$$S(p) = \log_2 \frac{1}{p^C} \quad (C \text{는 양의 상수})$$

이 성립한다고 한다. 일어날 확률이 $\frac{1}{2}$ 인 사건이 일어날 때 놀람의 정도는 1이고, 두 사건 A, B 는 다음 조건을 만족시킨다.

- (가) A 는 5개의 동전을 던질 때 앞면이 4개 나오는 사건이다.
 (나) B 는 A 와 서로 독립이다.

두 사건 A, B 가 동시에 일어날 때 놀람의 정도가 7일 때, 사건 B 가 일어날 때 놀람의 정도는? (단, $\log_2 = 0.3$ 으로 계산한다.) [5점]

- ① $\frac{11}{3}$ ② $\frac{13}{3}$ ③ $\frac{15}{3}$ ④ $\frac{17}{3}$ ⑤ $\frac{19}{3}$

20. 학생 110명이 국어, 영어, 수학 시험을 보는데, 국어를 합격한 사람은 92명, 영어를 합격한 사람은 75명, 수학을 합격한 사람은 63명이고, 국어와 영어를 모두 합격한 사람은 65명, 국어와 수학을 모두 합격한 사람은 54명, 영어와 수학을 모두 합격한 사람은 48명이다. 세 과목 모두 합격한 학생 수의 최솟값은? [5점]

- ① 36 ② 37 ③ 38 ④ 39 ⑤ 40

[21~25] 각 문항의 답을 답안지에 기재하시오.

21. 함수 $f(x)$ 와 상수 a 가 모든 실수 x 에 대하여 등식

$$6 + \int_a^x \frac{f(t)}{t^2} dt = x$$

를 만족시킬 때, $f(a)$ 의 값을 구하시오. [3점]

22. 9개의 알파벳 P, O, L, I, C, E, M, A, N을 반드시 한 번씩 사용하여 사전식으로 배열할 때, POL로 시작하는 문자열 중에서 POLICEMAN은 몇 번째 문자열인지 구하시오. [4점]

POL□□□□□□□

23. 수직선 위를 움직이는 점 P의 시간 t ($t \geq 0$)에서의 위치 함수 $f(t)$ 가 $f(t) = t^3 + 3t^2 - 2t$ 이다. 점 P의 $0 \leq t \leq 10$ 에서의 평균속도와 $t = c$ 에서의 순간속도가 서로 같을 때, $3c^2 + 6c$ 의 값을 구하시오. [4점]

24. 지수방정식 $9^x - 2(a+4)3^x - 3a^2 + 24a = 0$ 의 서로 다른 두 근이 모두 양수가 되도록 하는 모든 정수 a 의 값의 합을 구하시오. [4점]

25. 모든 자연수 n 에 대하여

$$\sum_{k=0}^n k(k-1)(k-2) {}_n C_k p^k (1-p)^{n-k} = \boxed{\text{(가)}} \times p^3$$

이 성립한다. (가)에 알맞은 식을 $f(n)$ 이라 할 때, $f(10)$ 의 값을 구하시오. (단, $0 < p < 1$) [5점]

※ 확인사항

▷ 답안지의 해당란에 필요한 내용을 정확히 기입·표기했는지 확인하시오.