

# 新北市立高中職 101 學年度教師聯合甄選

## 英文科試題

### I. 文意字彙: 32%，每題 2 分

1. Despite strong political opposition, the President remained \_\_\_\_\_ in his support of the new tax policy.  
(A) steadfast (B) conscious  
(C) far-fetched (D) meticulous
2. Soon after the airplane took off, the young lady began to feel \_\_\_\_\_ and had to take medicine for her upset stomach.  
(A) buoyant (B) brusque  
(C) nauseous (D) malignant
3. As the construction project became \_\_\_\_\_ in controversy, the government decided to postpone funding until a consensus could be reached.  
(A) slogged (B) mired  
(C) molded (D) vaunted
4. Thanks to the crucial evidence, the suspect was released after being wrongly \_\_\_\_\_ by the police for 48 hours for a crime he did not commit.  
(A) imposed (B) detained  
(C) incubated (D) obliterated
5. Jeffery tried to get to know his new classmate, but she \_\_\_\_\_ all his offers of friendship.  
(A) echoed (B) verified  
(C) rebuffed (D) assumed
6. My husband and I were \_\_\_\_\_ to see that so much food was thrown away after the wedding reception. Isn't there any way to avoid such kind of waste?  
(A) amused (B) appalled  
(C) contented (D) exalted
7. The passengers are advised to wear \_\_\_\_\_ clothes when walking along a badly-lit road at night.  
(A) conspicuous (B) existential  
(C) illustrious (D) magisterial
8. As part of the Gates Foundation's global health initiatives, Melinda travels to polio infected areas to help women \_\_\_\_\_ their children.  
(A) venerate (B) undulate  
(C) inoculate (D) simulate

9. After months of \_\_\_\_\_ headlines about the Prime Minister's corruption scandal, thousands of angry citizens rallied to protest.
- (A) vulnerable (B) negligible  
(C) snappy (D) tawdry
10. Without being properly informed, many AIDS victims of the country ignore or delay countermeasures, thus \_\_\_\_\_ the problem.
- (A) aggravating (B) extenuating  
(C) implicating (D) upbraiding
11. The principal prefers not to \_\_\_\_\_ student misbehavior publicly; instead, she asks the troublemakers to go to her office and talks to them about their problems.
- (A) validate (B) repudiate  
(C) modulate (D) castigate
12. The news about Lisa's secret engagement \_\_\_\_\_ quickly through Facebook; by the end of the day, all her colleagues had known about it.
- (A) conjectured (B) disseminated  
(C) relinquished (D) solicited
13. Plastic bags are a major eco-problem, littering city streets, finding their way into our once \_\_\_\_\_ rivers and crowding landfills.
- (A) turbulent (B) noxious  
(C) pristine (D) mutable
14. The \_\_\_\_\_ of Latin by the various vernaculars, in combination with the eighteen-century prestige of French culture caused French to become an official language in Europe.
- (A) sovereign (B) accommodation  
(C) legitimacy (D) supersession
15. \_\_\_\_\_ order, which is based on time, involves writing about events in the order in which they occur.
- (A) chronological (B) transitional  
(C) conventional (D) residential
16. In spite of George's remarkable intelligence, he was frequently \_\_\_\_\_ when confronted with practical matters.
- (A) pensive (B) coddled  
(C) urbane (D) baffled

## II. 克漏字: 20%, 每題 2 分

( I ) Mamallapuram in South India isn't spinning straw into gold, fairytale-style, but it is doing something 17 as amazing: turning garbage into fuel. The historic

town is a major draw of travelers and home to many restaurants and hotels ———  
\_\_18\_\_ that generate about three tons of food waste a day. Previously, all of  
\_\_19\_\_ ended up in open dumps. But Hand in Hand trained and employed local  
people to collect the waste, \_\_20\_\_ up about a tone of the garbage each day. The  
garbage is then \_\_21\_\_ methane, which is used to generate electricity. This way the  
town’s need for power is greatly reduced and it becomes cleaner, too.

17. (A) even                      (B) highly                      (C) still                      (D) almost  
18. (A) results                      (B) reliefs                      (C) venues                      (D) variations  
19. (A) it                      (B) them                      (C) which                      (D) what  
20. (A) rustle                      (B) rustled                      (C) rustling                      (D) to rustle  
21. (A) disposed of                      (B) converted into                      (C) stayed level with                      (D) measured up to

( II ) A museum in the United States has sparked off another round in an astronomical debate by installing a display of the solar system that excludes the Planet Pluto. The \_\_22\_\_ decision by the New York’s Rose Center for Earth and Space to include only eight planets has raised the ire of many astronomers and stargazers. In the large-scale solar-system model at Rose Center’s Hayden Planetarium, only the eight planets from Mercury to Neptune are shown orbiting the sun. It seems as if Pluto, at least in the Rose Center, has been \_\_23\_\_ after 70 years as a full-fledged planet.

Pluto was discovered in 1930 through painstaking observations made by Clyde Tombaugh, an astronomer working at Arizona’s Lowell Observatory. Tombaugh believed that apparent variations in the orbit of Uranus implied that an as-yet-undiscovered planet must exist in the farthest reaches of the solar system. The irony is that these supposed variations in Uranus’s orbit, recorded for decades, were in fact \_\_24\_\_, as was revealed when modern spacecraft made more accurate measurements possible.

As further observations were made, it became clear that the ninth planet was unique. Pluto, with a diameter of 2,340 kilometers, is far smaller than its planetary neighbor. Moreover, in 1992 astronomers discovered an icy asteroid over 100 kilometers in the Kuiper Belt, Neptune. Scientists now estimate that there are over 35,000 objects larger than 100 kilometers in the Kuiper Belt, and some of them could be nearly as large as Pluto. This tends to support the contention that perhaps Pluto should be considered the largest asteroid rather than the smallest planet.

\_\_25\_\_ these developments, the International Astronomical Union voted in 1999 to maintain Pluto’s traditional planetary status. This has \_\_26\_\_ the thousands of professional and amateur astronomers who were outraged by the Rose Center’s decision. Either way, Neil Tyson, the director of Hayden Planetarium, is not concerned. He said, “There is no scientific insight to be gained by counting planets.

Eight or nine, the numbers don't matter.”

22. (A) influential (B) controversial (C) experimental (D) substantial  
23. (A) transformed (B) solicited (C) deprived (D) demoted  
24. (A) erroneous (B) meticulous (C) prospective (D) obstinate  
25. (A) In support of (B) In spite of (C) Consistent with (D) Based on  
26. (A) opposed (B) suppressed (C) appeased (D) provoked

### III. 文意選填：8%，每題2分

South Africa, officially the Republic of South Africa, is a country located at the southern tip of Africa. It is divided into nine provinces, with 2,798 kilometers 27 on the Atlantic and Indian oceans. To the north of the country lie the neighboring territories of Namibia, Botswana and Zimbabwe; to the east are Mozambique and Swaziland; while Lesotho is an enclave coastline by South African territory.

South Africa is multi-ethnic and has diverse cultures and languages. Eleven official languages are recognized in the constitution. Two of these languages are of European origin: South African English and Afrikaans, a language which 28 mainly from Dutch that is spoken by the majority of white and Coloured South Africans. Though English is commonly used in public and commercial life, it is only the fifth most-spoken home language. All ethnic and language groups have political representation in the country's constitutional democracy comprising a parliamentary republic; unlike most parliamentary republics, the positions of head of state and head of government are 29 in a parliament-dependent President.

About 79.5% of the South African population is of black African ancestry, 30 among a variety of ethnic groups speaking different Bantu languages, nine of which have official status. South Africa also contains the largest communities of European Asian, and racially mixed ancestry in Africa.

Today South Africa enjoys a relatively stable mixed economy that draws on its fertile agricultural lands, abundant mineral resources, tourist attractions, and highly evolved intellectual capital. Greater political equality and economic stability, however, do not necessarily mean social tranquility. South African society at the start of the 21st century continued to face steep challenges: high crime rates, ethnic tensions, great disparities in housing and educational opportunities, and the AIDS pandemic. It is ranked as an upper-middle income economy by the World Bank, one of only four countries in Africa in this category (the others being Botswana, Gabon and Mauritius).

It has the largest economy in Africa, and the 28th-largest in the world. About a quarter of the population is unemployed and lives on less than US\$1.25 a day.

(A) merged	(B) divided	(C) surrounded	(D) derived
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#### IV. 篇章結構：8%，每題 2 分

Wagner's single-handed creation of his own type of musical drama was a fantastic accomplishment, considering the scale and scope of his art. 31 In this scheme, as in his model, the *Oresteia* of Aeschylus, the stage events are few but crucial, the main part of the action being devoted to the working out of the characters' motivations.

32 He skillfully keeps the broad outlines clear while he consistently developed the leading motives to mirror every shifting nuance of the psychological situation. Criticism of these motives as arbitrary, factual labels shows a misunderstanding of Wagner. He called them "carriers of the feeling." Owing to their essentially emotional character, their pliability, and Wagner's resource in alternating, transforming, and combining them, they function as subtle expressions of the changing feelings behind the dramatic symbols.

The result of these methods was a new art form, of which the distinguishing feature was a profound and complex symbolism working on three indivisible planes—dramatic, verbal, and musical. The vital significance of this symbolism has been increasingly realized. The common theme of all his mature works is the romantic concept of "redemption through love." 33 In *The Ring* there are at least five interwoven strands of overt meaning concerned with German nationalism, international Socialism, the philosophy of Schopenhauer, Buddhism, and Christianity. On another level, there is a prophetic treatment of some of the themes of psychoanalysis: power complex arising from sexual inhibition; incest; mother fixation; and Oedipus complex.

He has been much criticized for this strongly personal treatment of a religious subject, which mingles the concepts of sacred and profane love. 34 Wagner's influence, as a musical dramatist and as a composer, was a powerful one. Many operatic composers have profited from his reform in the matter of giving dramatic depth, continuity, and cohesion to their works.

- (A) In setting the poem, he used his mastery of construction on the largest scale.**
- (B) But this element became a mere catalyst for much deeper complexes of ideas.**
- (C) His method was to condense the confused mass of material at his disposal—the innumerable conflicting versions of the legend chosen as a basis—into a taut dramatic scheme.**
- (D) But in the light of later explorations in the field of psychology, his insight into the relationship between religious and sexual experience seems merely in advance of its time.**

**V. 閱讀測驗: 32% , 每題 2 分**

**(I)** As the father of three energetic and sometimes unruly young kids, I always look for words like “child friendly” in a hotel’s promotional material.

But what does child friendly mean, exactly? At the five star Florida beach resort we checked into last year, it meant that someone deposited a teddy bear on the bed at turndown and offered overpriced babysitters.

What’s a five star hotel, for that matter? The two most established ratings systems in the United States, AAA and the Forbes Travel Guide, can’t agree on that. But it becomes even more confusing when you compare them to the European star ratings or one of the rankings offered by online agencies such as Hotwire, Priceline, or TripAdvisor.

In fact, many of the travel industry’s favorite marketing slogans are either highly subjective or completely unverifiable. Those include assertions that a hotel or a cruise line is “all inclusive,” and range from harmless hyperbole—like the Caribbean inn that says it’s the “most romantic” in the region, to the patently absurd, such as the airline that brags it has the “best” economy-class seating.

Let’s take a look of what’s included in an all-inclusive product. Cruise lines have traditionally referred to their products as all inclusive because meals are part of your fare. But not all meals. The newest cruise vessels have specialty restaurants that cost extra. Just try taking a shore excursion or spending an afternoon in the spa and watch your room charges pile up.

How about hotels that say they’re the “most romantic”? Is there a litmus test for that? I’m not aware of one. This year TripAdvisor’s published a list of the most

romantic hotels. The one thing that all of the hotels on the list have in common is that they are not “child friendly”. Many are small properties in secluded places, like Kauai, Hawaii, or St. Simons Island, Ga. None of these would be my first choice for a family vacation, but does that mean they’re actually romantic? I am not so sure about it.

The economy class on the plane is often referred to as torture class, sardine class, or steerage. It is by definition uncomfortable and no one wants to be there. No, they all want to be sitting up front in the “good” seats. I’ve never heard anyone say, “Look, that airline just got an award for the best economy class. I think I’ll book a ticket on it next time!” I guess you get what you pay for. Or more to the point, what you don’t pay for.

None of this is to say that booking a successful vacation is impossible or even all that stressful or time consuming. But rather that success hinges on doing your own research and stop being a sucker.

35. What’s the best title for this passage?
- (A) Travel Right!
  - (B) A Consumer’s Report
  - (C) Don’t Believe the Hype!
  - (D) How to Plan a Perfect Vacation
36. Which of the following would be considered the most exaggerated claim by the author?
- (A) Sail with us and enjoy all inclusive cruises.
  - (B) This is the most romantic hotel on the island.
  - (C) We offer high quality, child friendly accommodations.
  - (D) You will find the seating in our economy class most comfortable and spacious.
37. According to the passage, which of the following is true about the hotel business?
- (A) Five-star beach resorts are luxurious and all inclusive.
  - (B) It is unlikely for a hotel to be both romantic and child friendly.
  - (C) Reviews put out by famous agencies are usually non-controversial.
  - (D) There are comprehensive rating systems to help consumers make valid decisions.
38. What is the author’s tone of voice?
- (A) Hopeful and assured.
  - (B) Humorous and sarcastic.
  - (C) Despair and disappointed.
  - (D) Skeptical and challenging.

( II ) Energy is the foundation for green building. Energy codes define the minimum acceptable standards for a climate zone. In today's world of climate change and high energy prices, it is critical that buildings use as few fossil fuels (including coal generated electricity) as possible to “futureproof” the home against unpredictable and rapidly rising prices.

Economically viable renewable energy sources are already available in today's market. Wind farms are going up across the nation, providing electricity at the competitive wholesale rate of three to five cents per kilowatt-hour. Electricity from burning biomass (crops and crop waste) also sells at a similar rate. Shell Oil, the most successful company in the oil industry, estimates that “by 2010 commercial energy from biomass could provide five percent of the world's power.” The value of that energy production could be over \$20 billion. Another up and coming renewable energy source is photovoltaic (PV) cells, which change sunlight into electricity. As technologies improve and as the US government and local utilities offer incentives, PV wattage costs are becoming increasingly competitive.

This information has a direct impact on us as builders. Buildings comprise 35 percent of direct energy use in the United States. Of that 35 percent, 64 percent goes into heating, ventilation, and air conditioning; 24 percent heats hot water; 13 percent provides lighting; and electrical appliances are beginning to cut a significant wedge into the pie. In terms of carbon dioxide production, in total, buildings are responsible for 48% of all greenhouse gasses.

The energy buildings require starts accumulating long before the building materials are on-site. The energy required to extract, manufacture, and transport building materials is tallied into the sum total known as embodied energy. Producing stone, glass, and clay--common building materials--makes up 6.9 percent of the industrial sector's 37 percent of total energy use. Cement production worldwide accounts for 8% of all carbon released into the atmosphere. Additionally, minerals are found in a wide variety of building materials in the home from plumbing and wiring to insulation. There are even minerals in paint and wallpaper. Because minerals must be mined, they come to us at a high price—both in terms of energy costs and environmental impact.

Green building reduces energy consumption in numerous ways. First, we can decrease the embodied energy of the building through efficient design, use of recycled and local materials, and recycling construction waste. Second, green building design reduces a building's energy consumption over its lifetime. Strategically placing



windows and skylights can eliminate the need for electrical lighting during the day. A whole house fan can cool the house overnight, rather than relying on air conditioning. High quality insulation reduces temperature regulation costs in both summer and winter. Additionally, houses can maximize passive heating and cooling. South facing windows with overhangs can reduce heating costs by 20 to 30 percent, and prevailing breezes, shading, and natural plantings can keep houses cooler in the summer. This list only scratches the surface of the possibilities for reducing a building's energy requirements.

39. Which of the following factors is referred to as the reason to promote green building?
- (A) Energy uncertainty
  - (B) Educational concern
  - (C) The safety of building
  - (D) Convenience of transportation
40. Which of the following is **NOT** renewable energy?
- (A) Electricity
  - (B) Sunlight
  - (C) Biomass
  - (D) Wind
41. Among the five paragraphs, which paragraph discusses energy use in buildings?
- (A) Paragraph 1
  - (B) Paragraph 2
  - (C) Paragraph 3
  - (D) Paragraph 5
42. Which of the following statement is true about embodied energy?
- (A) The greatest part of it goes to air conditioning and ventilation.
  - (B) The use of natural plant and sunlight would maximize its effects.
  - (C) It needs to be insulated sufficiently to meet those economic demands for energy.
  - (D) It represents the non-renewable energy consumed in the construction process.

(III) The excitement from Europe last November was palpable. Experiments had hinted at the discovery of a new fundamental ingredient of nature—a particle called the Higgs boson. This wasn't just any particle, but one that could potentially tell us that the theory physicists have been using to understand matter's fundamental building blocks for the last half century is premised on a secure foundation.

Even nonscientists—those for whom terms like “Higgs field,”

“gigaelectronvolt,” and “hadron” are almost a foreign language—were thrilled, inspired by the notion that we are on the verge of unraveling mysteries previously beyond our grasp.

“Hadron,” in fact, refers to particles that interact through one of the four forces of nature known as the strong nuclear force. The Higgs-boson experiments are taking place at the Large Hadron Collider, an enormous particle accelerator crossing the French-Swiss border. In the LHC’s underground labyrinth, scientists can observe the collision of protons—a type of hadron—that have been accelerated to nearly the speed of light. Those protons collide a billion times a second in a tiny region smaller than a human hair. When they do, they can turn into energy, as predicted by Einstein’s theory, and that energy can then create new types of matter, never before seen.

On the afternoon of Dec. 13, 2011, in Geneva, spokespeople from the two major LHC experiments, called ATLAS and CMS, announced the status of their respective searches for the Higgs boson. Named for the British physicist Peter Higgs, the particle—if it exists—would tell us that the Higgs mechanism, the half-century-old idea for understanding how elementary particles acquire their masses, is correct. Those masses are essential to much of the structure we see in the world. If electrons didn’t have mass, atoms wouldn’t form. And then neither would galaxies, planets, or life. There’s a lot more to all this structure than the Higgs mechanism alone, so the name “God particle,” coined by the Nobel Prize-winning physicist Leon Lederman and relished by the popular media, might be a bit misleading.

Nonetheless, the Higgs mechanism is critical to today’s theory of the basic elements of matter. Higgs and his colleagues theorized that space itself contains a sort of charge. Elementary particles acquire mass through their interaction with the charge. Space isn’t filled with Higgs-boson particles—you need a collider such as the LHC to make those—but the Higgs boson is the telltale sign that there really is such a “charge” in space.

But here’s the catch: the Higgs mechanism hasn’t yet been vindicated by experiments. The reason the news from Geneva was so momentous was that scientists at the LHC might have come one step closer to proving it. Such a discovery won’t turn our world around tomorrow either. But basic science is like that. For all the deep and fundamental truths we learn about nature, it’s rarely clear right away what the implications will be. It’s still unclear what a discovery of the Higgs boson will mean in 10 or 20 or 100 years’ time, but cultures where people learn more about their world, and science is valued, seem to fare well in the end.

43. Which of the following statements is **NOT** true about “hadron”?
- (A) Their movements at high speed can generate energy.
  - (B) Scientists at LHC observed their movements in a collider.
  - (C) Their existence has yet been discussed in the scientific arena.
  - (D) New matters can possibly be formed as a result of their movements.
44. Which of the following statements is true about the Higgs mechanism?
- (A) It is a theory of physics first proposed by Albert Einstein and Peter Higgs.
  - (B) It is a theory about how basic elements interact with charge to form matters.
  - (C) The theory provides new and strong evidence to how the universe is formed.
  - (D) The basic tenet of the theory is to prove that the universe is formed by masses.
45. What’s the main idea of this passage?
- (A) Scientists have proven the theory of “God particle” misleading.
  - (B) Scientists have discovered a new important matter, “Higgs boson”.
  - (C) Scientists are getting closer to prove the Higgs mechanism correct.
  - (D) Scientists have spent decades to study the structure of the universe.
46. What can be inferred about the author’s attitude toward basic science?
- (A) Supportive.
  - (B) Indifferent.
  - (C) Tolerant.
  - (D) Dubious.

**(IV)** In the late 1960s, the National Oceanic and Atmospheric Administration (NOAA) theorized that it could sap the strength of hurricanes by sprinkling them with a substance known as silver iodide. It was thought that silver-iodide particles would act as nuclei for the formation of ice, causing the water vapor in storms to freeze thereby creating more rain at the periphery of the hurricane. This would draw strength from the central “eye.” Two hurricanes were massively seeded, one in 1969 and one in 1970, but results were inconclusive. Over the next three decades, a variety of other theories were put forward, but nature always managed to maintain the upper hand. Science shifted its focus, placing emphasis on hurricane detection rather than prevention.

Now, however, a company in Florida has made some startling discoveries. Dynamat Inc. has created a powder that when air-dropped into a cloud can absorb up to 2,000 times its own weight in moisture, condensation, and rain. “It is the moisture that gives hurricanes their strength,” says CEO Peter Cordani—and this is precisely why Dynamat’s product is turning heads. The company made history on July 19, 2001, when a large military aircraft scattered 4,000 kilograms of Synomat powder into a developing thunderstorm. Within minutes, the storm was gone. “I had calls from a

weather tower and even from Channel 5 News in Miami,” says an excited Cordani, “saying that they had seen the cloud literally disappear off the radar screen.”

The magic of Dynamat’s powder is in the structure of the grains, which Cordani describes as “rather like a cornflake.” Their flattish structure creates wind resistance, allowing them to flutter slowly back and forth through the clouds, taking in moisture as they fall. It also gives them a large surface area in order to achieve maximum absorption. And to be more environmentally friendly, the powder has been designed to transform into a gel that dissolves in seawater and safely biodegrades on land.

Dynamat’s ultimate goal is to combat hurricanes, but the applications for this amazing powder do not stoop there. It could be used, for example, to ensure dry weather during important open-air sporting events or concerts. Conversely, the company has found that similar powders can help produce rainfall by coagulating raindrops as they fall, which prevents them from evaporating in the air. This could be effective in bringing moisture to the ground during drought and forest fires.

There are concerns about the long-term technology. After all, weather is a complex process that we are still only beginning to comprehend. Perhaps we should be looking for ways to withstand—rather than eliminate—the rigors of nature. As with the field of medicine, it will be science begin trespassing on GOD’s territory? That area remain as gray as the clouds in a gathering thunderstorm.

47. According to the passage, why is the experiment conducted in the summer of 2001 important?

- (A) It proved that the silver-iodide researchers had been correct in targeting a storm’s central “eye.”
- (B) It took the development of silver-iodide one step further by testing it on an actual storm cloud.
- (C) It demonstrated that Dynamat’s powder has the potential to weaken a hurricane.
- (D) It proved that Dynamat’s powder is effective for hurricanes and not for thunderstorms.

48. How does Dynamat’s powder achieve its effect?

- (A) It is composed of cornflake-like material that dissolves in seawater.
- (B) Its grains can flutter through the cloud, taking in moisture as they fall.
- (C) Its particles cause water vapor to freeze, thus drawing the strength from the central “eye.”
- (D) It contains a special substance that can drive moisture to the periphery of a storm.

49. Which of the following is true about the potential use of Dynomat's powder?
- (A) Creating a gel that is biodegradable and safely dissolves on land.
  - (B) Halting rain at desired times, such as during outdoor sporting events.
  - (C) Binding raindrops together so that they fall all the way to the ground.
  - (D) Stimulating the formation of clouds to produce rain in areas of drought or fire.
50. What is the author's attitude expressed in the last paragraph?
- (A) Apprehension about interfering with nature.
  - (B) Optimism about the benefits of controlling nature.
  - (C) Enthusiasm about scientists' efforts to deal with ethical issues.
  - (D) Pessimism about scientists' inability to manipulate the weather.