

※注意: Part I 題目請於試卷內之「選擇題作答區」依序作答，Part II 請作答於試卷內之「非選擇題作答區」。

Part I (40%): Reading Comprehension(閱讀並回答下列問題於試卷內之「選擇題作答區」):

Article 1: Excerpts of “Severe air pollution in Taiwan triggers emergency response”, by Wu Hsin-yun and Elizabeth Hsu, Central News Agency, Dec 31 2017

“The Environmental Protection Administration (EPA) opened a provisional command center Sunday in response to severe air pollution that affected northern Taiwan since the early hours of the day. The center was opened after the EPA forecast that the wave of air pollution originating from outside the country would affect 18 of Taiwan's 22 cities and counties, said Tsai Hung-teh, head of the EPA's Department of Air Quality Protection and Noise Control.

Its first directive was to ask state-run Taiwan Power Co. to cut electricity output by 4,250 MW, meaning that eight of the coal-fired generators at the Taichung Power Plant were shut down, Tsai said. The center also asked schools to hoist pollution warning flags to remind students and teachers to take precautions and urged port authorities to instruct ships to use low-sulfur fuel oil and reduce their speed when entering Taiwanese ports to emit fewer pollutants. Dust-prone roads were also being watered, and farmers were being asked not to burn farm waste outdoors or face penalties, Tsai said.”

Article 2: Excerpts of “Executive Yuan proposes amendments to address air pollution”, by Shih Hsiu-chuan, Central News Agency, Dec 11 2017

“The government on Monday proposed amendments that it hopes can address Taiwan's poor air quality and reduce the frequency with which red air quality alerts that signal severe air pollution occur. Dubbed the “14+N” strategy because it involves 14 measures and maybe more in the future, the proposed amendments to the Air Pollution Control Act are aimed at cutting Air Quality Index red alerts from 997 times in 2015 to 698 times in 2018 and 499 times in 2019, the government said. The major change to existing regulations would be to address pollution “at its sources,” Tsai Hung-teh (...), director-general of the Environmental Protection Administration's (EPA) Department of Air Quality Protection and Noise Control said at a press conference. The new provisions would subject fixed emitters of air pollutants, such as raw coal and petroleum coke, to rules set by the EPA on their use of fuel additives and fuel composition. (...)

Tsai focused instead on the Air Quality Index (AQI) the EPA now uses to measure air quality that takes into account six pollutants: particulate matter (PM10), fine particulate matter (PM2.5), sulphur dioxide (SO2), carbon monoxide (CO), ozone (O3) and nitrogen dioxide (NO2). He said the EPA would focus on reducing the number of times the AQI flashes red (for “unhealthy” air) compared to the number of times the PSI (pollution standards index) that was previously used flashed red in 2015, after correcting for the differences between the two indexes.

Another key element to the new regulations would be to impose harsher penalties on polluters for violating air pollution laws. The maximum fine would be raised 20-fold to NT\$20 million (US\$662,000) and violators would be subject to a mandatory minimum sentence of six months in jail for offenses that trigger sentences of less than five years.”

Answer the following questions. For Questions 1-4, select one answer choice:

1. (5%) According to Article 1, eight of the plants were shut down primarily because:
 - a. The pollution got too bad for workers to continue

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- b. It was no longer profitable to generate electricity
 - c. To help reduce the emissions
2. (5%) **True or False:** According to Article 1, dust prone roads were watered to help grow new pollutant-absorbing plants.
- a. True
 - b. False
 - c. Not specified in Article 1.
3. (5%) According to Article 2, the amendment strategy was named after the fact that:
- a. Air Pollution is increasing by double digits every year
 - b. There exist many different ways the strategy hopes to control air pollution
 - c. This will be the ultimate solution requiring little to no adjustment in the future
4. (5%) According to Article 2,
- a. Tsai Hung-the is the director-general of the Environmental Protection Administration.
 - b. The EPA has a single department that deals with potential harm to citizens from bad air and loud noises.
 - c. The EPA sets all governmental rules regulating the use of fuel.

For the following questions, consider each of the choices separately and select all that apply:

5. (10%) Which of the following would be methods employed by the amendments described in article 2:
- a. Impose rules on chemicals added to fuel that cause emissions
 - b. Adjust the AQI to detect 6 new emitters: PM10, PM2.5, SO2, CO, O3, and NO2.
 - c. Increase fines by over a factor of 10 for those that break the laws.
 - d. Use drones to spread water vapor when the AQI flashes red.
 - e. Decrease the red flashes of AQI to 499 in 2018.
6. (10%) Which of the following would be statements the EPA would likely agree to, given information in Articles 1 and 2:
- a. Most pollutants come from burning crops outside
 - b. Children and parents should be warned about high pollution
 - c. The PSI flashing red is a better indicator of air quality than the AQI flashing red
 - d. Imposing mandatory jail times would decrease the number of polluters
 - e. To combat air pollution, it is best to target the core emitters and permanently shut down 8 of the coal-fired generators

Part II (60%): Analytical Writing (分析寫作; 作答於試卷內之「非選擇題作答區」)

Read the following excerpts of news articles, then plan and compose a response to the particular issue below.

Responding to any other issue will receive a score of zero. Be sure to respond according to the specific instructions and support your position on the issue with reasons and examples drawn from such areas as your reading, experience, observations, and/or academic studies.

Article 3: Excerpts from "Lawmakers, unions push for air quality controls in schools", by Lin Chia-nan, Taipei Times, Jan 16 2018

"The Environmental Protection Administration (EPA) should include primary and secondary schools in its indoor air quality regulations, as children are more vulnerable to airborne pollutants, the National Federation of Education Unions and lawmakers said yesterday.

According to EPA data from 2016, (...) about 920,000 students at the cities and counties' primary and secondary schools breathe heavily polluted air, yet their schools are not on the list of regulated places, (federation secretary-general) Liu (Ya-ping) said.

The EPA regulates the concentrations of carbon monoxide, carbon dioxide, formaldehyde, bacteria and PM10 (fine particulate matter that measures 10 micrometers or less) in certain indoor places. Regulated places include universities, public libraries, museums, hospitals, social welfare agencies, governmental offices, transportation stations, financial businesses, movie theaters, performance halls, department stores, hypermarkets and gyms with floor areas of at least 2,000m², according to the agency's guidelines released in January last year.

While the EPA often warns that bad air quality poses a greater threat to children's health, it does not regulate the air quality of their classrooms or activity centers, Democratic Progressive Party Legislator Hsu Chih-chieh (...) said. Reducing the air pollution outside the schools would be a more effective way to protect children's health, EPA Department of Air Quality Protection and Noise Control Director-General Tsai Hung-the (...) said yesterday. Most of the primary and secondary schools only have up to 25 students in each classroom, where pollutants are less significant as compared with outdoor places, Tsai said.(...)"

Article 4: Excerpts from "Parents demand air purifiers be installed in schools, not all successful ", by Li Ruohan, Global Times, Dec 28 2015

"Parents beset by hazardous smog in cities such as Beijing and Tianjin are calling for air purifiers to be installed in classrooms as many cannot take time off work to look after their children when schools close due to pollution. Many schools have already installed air purifiers, while others are still waiting for official approval from the authorities despite the fact that parents are eager to buy purifiers themselves.

(...)

Many parents reached by the Global Times said they have tried to or already bought purifiers for their children's classrooms. A father, surnamed Jiang, whose child is studying at the Primary School Attached to Peking University, told the Global Times that parents in his child's class paid 200 yuan (\$30) each to buy two purifiers after Beijing issued its first smog red alert. Wu, father of a 4-year-old girl who attends a kindergarten in Chaoyang district in Beijing, told the Global Times that his daughter's class is not so lucky, because the kindergarten refused the parents' offer to buy purifiers for the class, as the local educational authority may collect the purifiers to redistribute them to all the area's schools.

(...)

Air purifiers are not on government purchase lists in many cities, which means many local authorities cannot spend their budget on purifiers, a newspaper affiliated to the Ministry of Education reported Wednesday. Air purifiers are not affordable for every school, and parents might differ on which kind of purifier to purchase and where to place the machine, added the report. Some parents have attempted to crowd-fund air purifiers for their children's schools, but these attempts have usually been refused by schools and teachers, saying they need approval from the education authorities to use purifiers.

(...)"

The government should not place air quality sensors inside Taiwanese school buildings, because the problem of indoor air quality in schools can be more efficiently solved by the affected parents and teachers.

Write a response in which you discuss the extent to which you agree or disagree with this claim **AND** the reasons on which that claim is based. When possible, please provide an economic justification for your arguments.

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題號： 115
科目： 專業英文(D)
節次： 3

國立臺灣大學 107 學年度碩士班招生考試試題

題號：115
共 4 頁之第 4 頁

You should write no less than 300 words, but no more than 1000 words. Your response will be evaluated for its overall quality based on how well you:

- Respond to the specific task instructions
- Consider the complexities of the issue
- Organize, develop, and express your ideas
- Support your ideas with relevant reasons and/or examples
- Control the elements of standard written English

Note: An essay not directly addressing the topic is considered off-topic and receives no points.

Before beginning writing, you may want to think for a few minutes and then plan your response. Use the bottom of this page to plan your response, and then write your response in the answer sheets(試卷內之「非選擇題作答區」). Be sure to develop your positions completely and organize it coherently, but spare some time to proof-read what you have written to make any revisions you deem necessary.

Plan Your Response Here – Write Your Essay in the Answer Sheets (試卷內之「非選擇題作答區」)

試題隨卷繳回