

DEVOIR DE FIN DE SEMESTRE N°1

In Sweden, Trash Heats Homes, Powers Buses and Fuels Taxi Fleets

1/ In a cavernous room filled with garbage, a giant mechanical claw reaches down and grabs five tons of trash. As a technician in a control room maneuvers the spiderlike crane, the claw drops its moldering harvest down a 10-story shaft into a boiler that is hotter than 1,500 degrees Fahrenheit (815 degrees Celsius). A fetid odor emanates from plastic trash bags discarded by hundreds of thousands of homes.

2/ The process continues 24 hours a day to help fuel this power plant run by Tekniska Verken, a municipal government company in Linköping, a city 125 miles south of Stockholm. It is one of Sweden's 34 "waste-to-energy" power plants. Instead of burning coal or gas, this power plant burns trash to generate electricity and heat water for home and commercial use. "We don't look at it as waste," said Klas Gustafsson, vice president of the company. "We use the energy content of waste as much as possible."

3/ In this Scandinavian country, about 49 percent of household waste is recycled, and roughly 50 percent of garbage is incinerated in power plants like this one. Heat is transformed into steam that spins turbines to generate electricity much like conventional power plants that burn coal or gas.

4/ Trash-burning plants do have their drawbacks, such as emissions like conventional power plants fueled by natural gas and coal. However, methane generated from organic waste in landfills is reduced. This is important. In the short term, methane is about 72 times more potent as a greenhouse gas than carbon dioxide. Besides, proponents say using trash as an energy supply also reduces burning fossil fuels extracted from the earth and shipped around the world using even more fossil fuels. Tekniska Verken estimates that its trash-burning operations last year avoided emitting the equivalent of 467,000 tons of carbon dioxide.

5/ "Waste-to-energy is a reasonable short-term solution," said Owen Gaffney, director of international media and strategy at the Stockholm Resilience Center, which conducts environmental research. "It is less carbon intensive than coal and it uses resources more efficiently than simply putting them in landfill where they would decompose and release greenhouse gases anyway." Along with heat and electricity, Tekniska Verken produces methane biogas from 100,000 tons of food and organic waste each year. This biogas runs more than 200 city buses in the country, as well as fleets of garbage collection trucks, and some taxis and private cars.

6/ However, garbage-fueled power plants are not a clean energy source. Some opponents claim these power plants are a "false solution" that green-washes dirty incineration. "The process of burning trash is inherently polluting," said Leah Kelly, senior attorney with the Environmental Integrity Project, a nonprofit based in Washington. Critics also warn that these power plants discourage reducing and recycling waste, and also detract from investment in renewable energy like solar and wind.

7/ Along with its domestic production, Sweden also imports trash from Norway and Britain each year to fuel power plants. These countries pay Sweden to accept their trash because it can be cheaper than paying landfill taxes. Sweden has not run out of garbage to burn, but more plants have been built to use an available fuel source.

8/ Burning trash for energy seems particularly practical for large, developing nations that lack modern trash disposal systems where garbage poses a massive environmental and health menace. In these countries trash is typically carted to mountainlike dumpsites where methane causes fires. Such sites often lack the concrete or plastic linings found in modern “sanitary landfills” and can leach toxins into soil or water supplies. Garbage dumpsites are also serious hazards for poor people who pick through rubbish to scavenge recyclables by hand.

9/ Building large, effective infrastructure projects requires good governance and sound business practices. Waste collection needs organized infrastructure and logistics. And most importantly, citizens need to be educated about proper disposal of waste. “If you have citizens who don’t know how to use the system,” said Mr. Arnberg of IVL, who has consulted for energy projects around the world, “it doesn’t matter how much you invest.”

*Adapted from The New York Times
Sept. 21, 2018*

PART ONE: READING COMPREHENSION (30pts)

I/ Say what type of text it is and justify:

instructive – narrative – informative – descriptive

II/ Choose the best alternative:

The text conveys the idea that:

- 1) Conflicts heat up between environmentalists and waste incineration proponents.
- 2) Sweden is a European leader in turning trash to treasure.
- 3) Waste-to-energy has become a preferred method of rubbish disposal in the E.U.

III/ Complete the sentences on the answer sheets with information from the text.

IV/ Indicate whether the following statements are True or False. Justify with details from the text:

- 1) In Sweden, instead of recycling all the household rubbish, almost half of it is burned for energy.
- 2) Methane is a greenhouse gas which is as powerful as carbon dioxide.
- 3) For some European countries, exporting rubbish is much more cost-effective than dumping it in landfills.

V/ List the merits of turning waste to energy.

VI/ In addition to polluting the environment, what are rubbish-burning plants criticized for?

VII/ What are the environmental and health risks resulting from garbage dumping in developing countries?

VIII/ "If you have citizens who don't know how to use the system, it doesn't matter how much you invest." (§9) means

- 1) Getting citizens involved financially in the process of waste conversion is of a paramount importance.
- 2) The more money the government spends on rubbish disposal, the more committed people become to the system.
- 3) A successful waste treatment policy depends primarily on teaching people how to deal with their domestic garbage.

IX/ Find in the text words having nearly the same meaning as:

- 1) stinking and smelly (§1)
- 2) emit (§5)
- 3) naturally (§6)
- 4) dangers (§8)

X/ What do the underlined items in the text refer to?

- 1) its (§1)
- 2) 467,000 tons (§4)
- 3) them (§5)
- 4) Such sites (§8)

PART TWO: LANGUAGE TASKS: (30pts)

Task One: Put the bracketed words in the correct tense and/or form: (10pts)

July and August 2021 have been marked by extreme weather conditions — from drought and fires in Southern Europe, Russia and North America to severe (1) **(flood)** in Western Europe, Africa and Asia. In many parts of Greece on Monday, the fierce winds weakened, so the fires (2) **(not/spread)** further. The break for emergency workers is likely (3) **(be)** short-lived, however, as another heat wave with temperatures of over 40 degrees is on its way — with the potential to worsen the situation. Forest fires (4) **(rage)** in Greece for weeks, to the north of Athens and on the island of Euboea in particular. While firefighters are slowly getting a grip on the flames on the mainland, the fires (5) **(still/ blaze)** on the island of Euboea and also on the Peloponnese Peninsula. But even in areas where the situation seems to have calmed down, individual embers can quickly reignite. Fires in Greece (6) **(not/be)** unusual during hot summers, but the scale of the 2021 fires is. Almost twice as many forests (7) **(go up)** in flames in Greece by August 5 as the average for the years 2008 to 2020. In addition to climate change, the reasons for the (8) **(destroy)** flames are complex and often man-made: a (9) **(careless)** tossed cigarette that smolders on the dry ground, glass shards from a (10) **(break)** bottle that work like magnifying glasses...

Task Two: Complete with the appropriate word. (The first two letters the word begins with and a synonym of the word are provided to help you): (10pts)

Rundown roads, reckless driving and poor vehicle maintenance are all being blamed for a spike in (1) **de...** (= fatal) traffic accidents in Tunisia. On Wednesday, at least 16 people were killed and 85 (2) **wo....** (= injured) when a lorry's brakes failed and it bumped into a bus in the centre of the country. The dawn accident near Kasserine has also left

(3) ar... (= about) 15 cars ablaze in one of the country's worst (4) cr... (= collisions) in recent years. Road traffic deaths (5) ro... (= increased) by nine per cent in the first five months of this year compared with 2015, sparking calls for (6) to... (= stricter) measures to crack down on widespread traffic offences. By the end of May the death toll from road accidents in the nation of some 11 million inhabitants (7) at... (= reached) a grim 528 people. "We're experiencing road terrorism. The accident rate is simply (8) fr... (= terrifying)," said Imed Touil, head of the Tunisian Road Safety Association. "Sixty per cent of those killed are aged 15 to 39," Mr Touil added. This is frustrating in a country where authorities have (9) fo... (= struggled) to redress the economy and solve youth (10) jo... (= unemployment) since the 2011 uprising.

Task Three: Express differently starting as given on the answer sheets: (10pts)

- 1) They report that the army defused a bomb in the public square.
- 2) "The hurricane hit this town three weeks ago", said the journalist.
- 3) The things he has done make him a trustworthy person.
- 4) There were many victims because the rescue workers didn't intervene on time.
- 5) Unless they get the government's funds, they will not establish their startup.
- 6) Although he clearly explained the matter, he was hugely attacked.
- 7) She seldom follows anyone's advice.
- 8) This factory's chimneys emit fumes.
- 9) It was not necessary for you to send more mails.
- 10) It's a pity they lost the match.

PART THREE: WRITING TASKS: (20pts)

Task One: Find and correct the five mistakes in the following paragraph: (2.5pts)

With 39 million deaths worldwide and still no known cure, HIV is a looming threaten across the globe. The virus harms the system immune by attacking and destroying a type of white blood cell that helps fighting infections, impeding a body's ability for stay healthy.

Task Two: Put in order to obtain a coherent sentence: (2.5pts)

- a) of carbon-free electricity globally", and
- b) to contribute to power sector decarbonisation".
- c) The International Energy Agency states that "nuclear power
- d) adds that it also has "significant potential
- e) has historically been one of the largest contributors

Task Three: Essay: (15pts)

In a recent speech, the United Nations Secretary-General Antonio Guterres has warned about "the disaster the world is sleepwalking to" because of global warming and the resulting climate change.

What must be done by individuals, governments and organizations to deal with this planetary emergency?

Write a 15-line essay to answer this question.

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(ANSWER SHEETS)

PART ONE: COMPREHENSION QUESTIONS: (30 pts)

I/Text Type and Justification: (1pt)

.....
Justification:

II/The Idea: (1pt)

.....
III/Sentence Completion: (4pts)

- 1) Tekniska Verken's garbage -fueled power plant burns trash in order to.....
.....and Food and
organic waste in particular is used to make.....
for city buses, garbage collection trucks, etc.
- 2) The trash disposal system in developing countries consists in carrying rubbish
.....which, unlike modern sanitary landfills
.....
- 3) Effective waste collection and management needs both
..... as well as

IV/True or False Statements: (6pts)

- 1) (.....).....
.....
- 2) (.....).....
.....
- 3) (.....).....
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.....
V/Merits: (4pts)

- 1).....
- 2).....
- 3).....
- 4).....

VI/Criticism: (2pts)

- 1)
- 2).....

VII/Risks: (3pts)

- 1).....
- 2).....
- 3).....

VIII/The Correct Option: (1pt)

.....
.....

IX/Vocabulary Items: (4pts)

- 1)
- 2)
- 3)
- 4)

X/References: (4pts)

- 1)
- 2)
- 3)
- 4)

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PART TWO: LANGUAGE TASKS: (30pts)

TASK ONE: (10 pts)

1)	6)
2)	7)
3)	8)
4)	9)
5)	10)

TASK TWO : (10pts)

1)	6)
2)	7)
3)	8)
4)	9)
5)	10)

TASK THREE: (10pts)

- 1) The army
- 2) The journalist said.....
- 3) What
- 4) Had
- 5) Provided.....
- 6) Despite
- 7) Seldom
- 8) This factory haschimneys.
- 9) You needn't.....
- 10) They wish

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PART THREE: WRITING TASKS: (20pts)

Task One: Mistake Correction: (2.5pts)

Mistake	Correction	Mistake	Correction
1)	1)	4)	4)
2)	2)	5)	5)
3)	3)		

Task Two: Reordering: (2.5pts)

1 =	2 =	3 =	4 =	5 =
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Task Three: Essay: (15pts)

[illegible]