

SULIT
6355/1
English For Science
And Technology
Kertas 1

Nama:.....

Tingkatan 5:.....

SMK METHODIST AYER TAWAR

PEPERIKSAAN PERCUBAAN SPM 2008

ENGLISH FOR SCIENCE AND TECHNOLOGY

Kertas 1

Satu jam lima belas minit

JANGAN BUKA KERTAS SOALAN INI SEHINGGA DIBERITAHU

Maklumat untuk calon

1. Tulis **nama** dan **tingkatan** anda pada ruangan yang disediakan.
2. Kertas soalan ini **mengandungi** dua bahagian: **Bahagian A** dan **Bahagian B**.
3. Jawab **semua** soalan.
4. Tuliskan semua jawapan anda untuk **Bahagian A** dan **Bahagian B** di ruang yang disediakan.
5. Anda dinasihati supaya mengambil masa 30 minit untuk menjawab soalan dalam **Bahagian A** dan 45 minit untuk menjawab soalan dalam **Bahagian B**

Information for candidates

1. Write your **name** and **form** in the space provided.
2. This question paper consists of two sections: **Section A** and **Section B**.
3. Answer **all** questions.
4. Write all your answers for **Section A** and **Section B** in the space provided.
5. You are advised to spend 30 minutes to answer the questions in **Section A** and 45 minutes on the questions in **Section B**.

Kertas soalan ini mengandungi 5 halaman bercetak.

SECTION A (20 marks)

You are advised to spend about 30 minutes on this section.

Part 1

Read the following text and complete the given task.

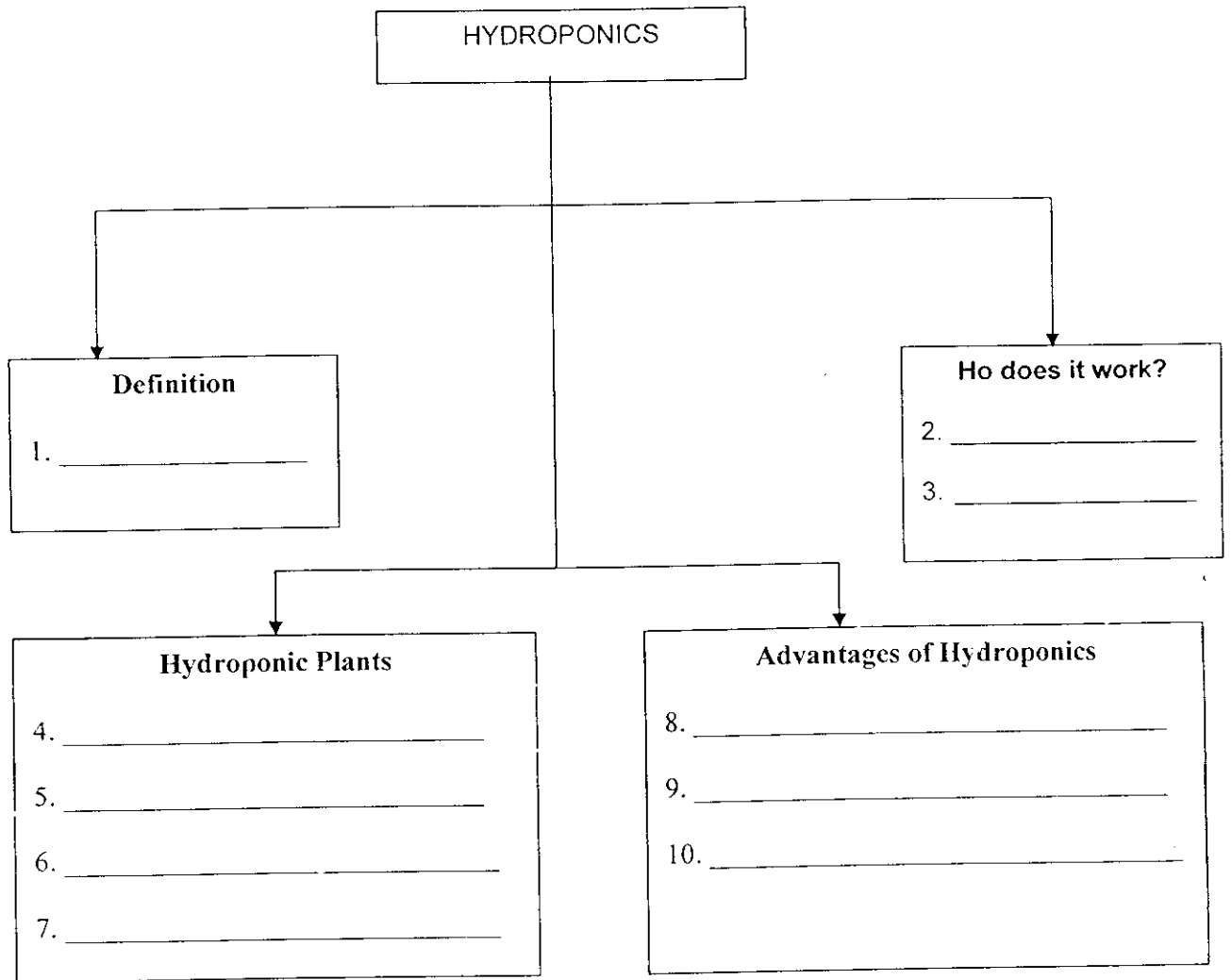
Hydroponics derives its name from the Greek word, *hydro-ponos*, meaning water-labour. Literally, hydroponics means water work. There is no soil in the hydroponic garden. No organic matter is present so nutrient is not available to the plants in the same way as it is in a soil garden. Instead, nutrients are added to the water. So, as plants are watered, they are also fed. There are many ways to feed and water plants. The method chosen becomes a hydroponic system. Common systems include hand-watered, recirculating system (with a submersible water pump), gravity fed from a nutrient tank into pots or trays, or a wick system.

A common question is, "What can be grown in hydroponics?" Surprisingly to some, anything that can be grown in soil can be grown in a hydroponic system! Flowers, herbs, vegetables, fruit trees, vines, and ornamental shrubs. Everything from aloe vera to zucchinis can be grown in this unique system.

There are many advantages of using a hydroponic system for growing plants. The most obvious of these advantages is that it is easier to control the plant growing environment. Unlike hydroponic system, traditional cultivation has restricted supply of suitable water, is lack of suitable soil, and has high labour cost and high cost of sterilizing soil. In hydroponic system, there is a greater reliability and predictability of plant production. Depending on what is being grown, most of the time hydroponic plants require less attention than soil-grown crops. Due to this, it can relieve some people of the added responsibility that soil-grown plants require.

As one can see, thousands of companies have sprung up dealing solely with hydroponics and hydroponic equipment. Maybe someday, when man inhabits outer space, this method will be the main protocol for growing consumable items.

Based on the information from the text, complete the graphic organizer below.



(10 marks)

Part 2

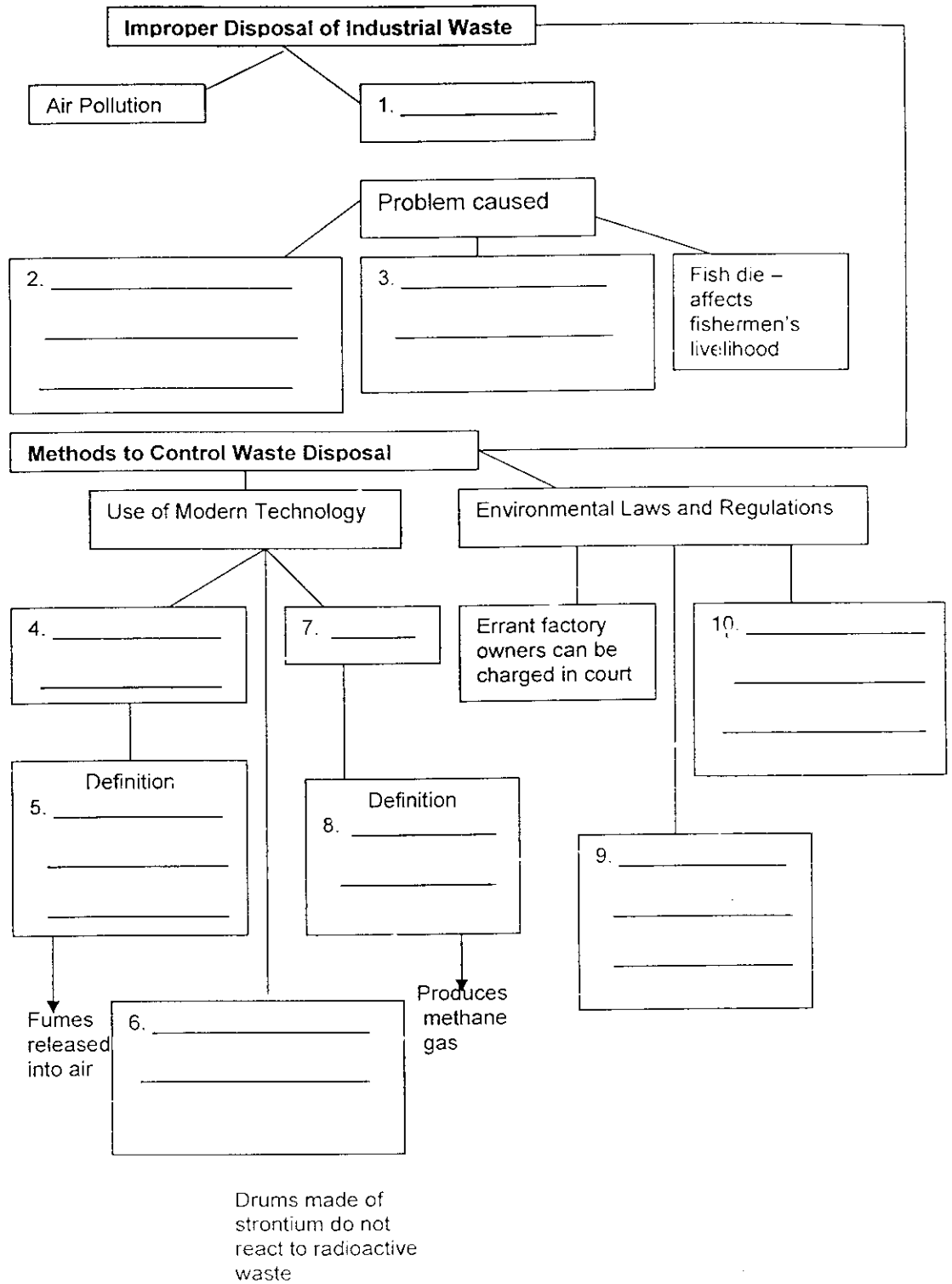
Read the following text and complete the given task.

One of the culprits of environmental pollution is the improper disposal of industrial waste. Toxic chemicals, oil, untreated waste and toxic fumes from manufacturing industries are discharged without being treated into water sources such as lakes, rivers and the sea and also released into the air. This causes large scale air and water pollution making water sources unsuitable for human consumption and other needs. Aquatic organisms and creatures die and when fish die, this affects the livelihood of fishermen.

There are many methods that can be used to control the disposal of industrial waste. Environmental Laws and Regulations are effective because errant factory owners can be charged in court and fined. Factories are also required to install pollution control mechanisms and treatment mechanisms to minimize air and water pollution. Also, only licensed contractors are allowed to treat and dispose off hazardous wastes.

The use of technology to control waste disposal is at present highly recommended. Direct burning, whereby industrial wastes are directly burned in a heating furnace and then filtered before being released into the air, is a common practice. Biogas technology is used to process agricultural wastes. This is done through the introduction of anaerobic microorganisms which digest the agricultural wastes producing methane gas which can be processed for other uses. Also, waste disposal drums made of strontium, a metal that does not react with radioactive wastes, can be used to store liquid or solid waste for a long time.

Based on the information from the text, complete the organizer below.



(10 marks)

SECTION B (30 marks)

You are advised to spend about 45 minutes on this section.

Study the information given below regarding conventional and organic food and how they are grown.

	Type of Food	
	Conventional	Organic
Advantages	<ul style="list-style-type: none"> • Cheaper to grow • Easily available - mass production • Use of additives - enhances taste 	<ul style="list-style-type: none"> • Less dependent on chemical fertilizers - better for the environment • More nutrients • Contains less harmful additives - reduces health risks
Disadvantages	<ul style="list-style-type: none"> • use of chemical fertilizers - endangers health • pollution – harmful to the environment 	<ul style="list-style-type: none"> • expensive • supply is limited - compared to demand

(Adapted from *Health Discovery Inaugural Edition*)

Write a **report** on this topic. Your report **must** include the following.

- A choice of **either** conventional or organic food
- Reasons for your choice
- A comparison of the two types of food
- Any other relevant information

Your report should be about **200 words** in length.