



San Carlos University of Guatemala

Faculty of Engineering

School of Sciences

Technical English: __1__

Section: __A__

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Group Number

5

Name of the assignment:

Homework No. 1 (First Exam)

ID Number	Name
202100081	Javier Andrés Monjes Solórzano
201908113	Eddy David Cartagena Ajquijay
202103984	Esvin Aldair Ixcotoyac Cux
201903767	Carlos Estuardo Monterroso Santos
201123021	Vanessa Elizabeth Torres Lopez



RS#01: Background on the Guatemalan Coup of 1954

Read the background on the Guatemalan coup, and complete the chart and questions at the end of the reading.

In the late 19th and early 20th centuries, Latin American governments were characterized by economic policies that allowed for liberal foreign investments from wealthy countries like the United States. Military dictators led a number of these Latin American governments. The United Fruit Company (UFCO), an extremely successful American owned and run company, profited greatly from investments it made in Guatemala. The business of United Fruit was bananas, and from bananas it had built a business empire in the Central American nations of Guatemala, El Salvador, Honduras, Nicaragua, Costa Rica and Panama.

The United States government was also interested in bananas, and had sponsored initiatives to promote the fruit in the American diet. Guatemala became known as a “banana republic,” a disdainful term for poor, developing countries that relied on a single cash crop, such as bananas, and were ruled by corrupt governments. Under the Guatemalan dictator Jorge Ubico, the United Fruit Company gained control of 42% of Guatemala’s land, and was exempted from paying taxes and import duties. Seventy-seven percent of all Guatemalan exports went to the United States; and 65% of imports to the country came from the United States. The United Fruit Company was, essentially, a state within the Guatemalan state. It not only owned all of Guatemala's banana production and monopolized banana exports, it also owned the country's telephone and telegraph system, and almost all of its railroad track.

The United Fruit Company was well connected to the Eisenhower administration. Secretary of State John Foster Dulles and his New York law firm, Sullivan and Cromwell, represented the company. Allen Dulles, the director of the Central Intelligence Agency (CIA) and brother of John Foster Dulles, had served on UFCO's Board of Trustees and owned shares of the company. Ed Whitman, the company's top public relations officer, was the husband of Ann Whitman, President Eisenhower's private secretary. Ed Whitman produced a film, *Why the Kremlin Hates Bananas*, which depicted UFCO fighting on the front line of the Cold War. The company’s efforts paid off. It picked up the expenses of journalists who traveled to Guatemala to learn its side of the crisis, and some of the most respected North American publications, including the *New York Times*, *Christian Science Monitor*, *New York Herald Tribune*, and *New Leader*, ran stories that pleased the company.

The Guatemalan Revolution of 1944 forced the resignation of the right-wing dictator, Ubico, who by then had ruled the nation for 13 years. The country held what many believed was the first true election in its history, popularly electing Dr. Juan Jose Arévalo to the presidency. A new constitution, based on that of the United States, was adopted. Arévalo, a liberal politician and educator, built over 6,000 schools and made great progress in education and health care. Arévalo was followed by Colonel Jacobo Arbenz, who became president in democratic elections in 1951. After Arbenz came to power, he extended political freedoms, allowing Communists in Guatemala to participate in politics. In a country of three million people, only 4,000 were registered as Communists; however, with the Cold War in full force, the United States was extremely concerned with the decision so close to home in the Western Hemisphere.

The United States became further alarmed after President Arbenz proposed “Decree 900,” to redistribute undeveloped lands held by large property owners to landless farmers, which constituted 90% of the population. The United States likened this land reform policy to that enacted by Communist regimes. By 1952, Arbenz had expropriated (taken from its owners) 225,000 acres and made them available to rural workers and farmers. At the time, just two percent of landowners owned 70% of useable agrarian lands, and farm laborers were kept in a form of debt slavery. The biggest obstacle to land reform in Guatemala was the United Fruit Company. While the government compensated property owners for the expropriated lands, United Fruit believed the compensation was not enough. The company demanded to be reimbursed for the full market value of the land, while the Guatemalan government was only willing to pay according to the worth of the land claimed in May 1952 tax assessments. This was problematic because United Fruit, like other big companies, had understated the value of the land to reduce its tax burden. The Guatemalan government was able to seize 40% of the land held by the giant corporation at little cost.

United Fruit felt that Arbenz was challenging it politically and financially. The company began a massive anti-communist propaganda effort against Guatemala in the U.S. press. The Eisenhower administration was also alarmed by the policy direction of the Arbenz government. Eisenhower did not want to intervene directly in Guatemala, however, to avoid the impression that the United States would attack a Western Hemisphere ally. Additionally, Eisenhower had vowed to reduce Cold War military spending. Instead, the United States utilized the newly created Central Intelligence Agency to launch a covert operation to remove Arbenz. The CIA was created, in part, to conduct espionage missions around the world. The Guatemalan operation was known as “Operation PBSUCCESS.” In 1952, two years after the election of Jacobo Arbenz, the CIA began recruiting an opposition force to overthrow him. Looking to the Guatemalan military, the CIA chose a disgruntled, anti-Arbenz officer, named Carlos Castillo Armas, to lead the operation.

On June 17, 1954, with the support of the U.S. government and the CIA, Armas launched an invasion. The invading forces numbered only 150 men, but the CIA had convinced the Guatemalan public and Arbenz that a major invasion was underway. The CIA set up a clandestine (secret) radio station to broadcast propaganda messages, jamming Guatemalan radio signals. Skilled American pilots were hired to bomb strategic points in Guatemala City. U.S. personnel flew the invasion aircrafts and filled the airways with bogus transmissions, adding to the impression. The CIA used spies within the Guatemalan military and government to actively undermine President Arbenz's authority, demoralize his supporters, and block efforts to defeat Armas.

Unaware that the CIA was orchestrating the military coup against him, Arbenz turned to the U.S. government for help, placing his faith in a so-called ally that stated it was committed to advancing and spreading democracy. On Sunday, June 27, 1954, President Jacobo Arbenz resigned from office and fled Guatemala. The CIA replaced him with a military dictator, Colonel Carlos Castillo Armas, whom the CIA designated the “liberator” of the Guatemalan people.

Adapted from: La Feber, Walter. America, Russia, and the Cold War, 1945-1996. 8th ed. America in Crisis. New York, New York: McGraw-Hill Companies, Inc., 1997. 152, 157-159,

<http://www.pbs.org/frontlineworld/stories/guatemala704/history/timeline.html>

RS#01: Background on the Guatemalan Coup of 1954

Major Players	What does this player want in Guatemala, why do they want it, and how do they get it?
The United Fruit Company	<p>*The United Fruit Company (UFCO) was an American company engaged in the production and sale of bananas. This company was present in all central American countries (except Panama) and some Caribbean countries.</p> <p>*Exploit the land for the export of bananas to North American territory.</p> <p>*He achieved his goals with the help of President Cabrera because he had shares in the company</p>
President Jacobo Arbenz	<p>*He was Minister of National Defense from 1944 to 1950, and the second democratically elected President of Guatemala, from 1951 to 1954. He was a major figure in the ten-year Guatemalan Revolution, which represented some of the few years of representative democracy in Guatemalan history.</p> <p>*Take land away from foreign companies and thus achieve a revolution in the country towards a good future.</p> <p>*Granting credits for production and training which led to a revolution without social distinction</p>
President Eisenhower's Administration	<p>*The administration of that government helped the overthrow of Arbenz.</p> <p>*The administration sought the overthrow of Arbenz due to land reforms</p> <p>*A CIA cover operation</p>
Colonel Castillo Armas	<p>*He was a Guatemalan soldier who rose to the rank of colonel and was also President of Guatemala from November 4, 1954 until he was assassinated on July 26, 1957.</p> <p>*To be a liberationist government characterized by the Anti-Communist struggle</p> <p>*He became president with the Counterrevolution of 1954, after invading Guatemala in June 1954, under the command of the National Liberation Army and, after capturing the city of Chiquimula and establishing its provisional capital there.</p>

Universidad de San Carlos de Guatemala
Engineering School
Technical English 1



MANUFACTURING, TOURISM AND HISTORY OF ENGINEERING

Instructions: You will make AND STUDY a **summary** of the topics *Manufacturing, Tourism and Engineering (introduction and history)* from pages 14 to 20. You will also make the **matching section** that can be found on top of page 14 as well as the definitions of the **glossary** that appears in page 17.

This computer can be done by computer or hand, it is up to you.

MANUFACTURING

The manufacture and assembly sector in Guatemala used to be integrated by industries involved in apparel and textiles. This sector represents a big percentage of the total exports of the country which means that this sector is continuously growing in Guatemala.

Guatemala is the perfect platform to supply directly to the biggest market in the world since we offer high profitability in the sector of manufacturing/assembly due to the cost-efficiency of human resources; strategic location, and low operation costs, to mention some of them.

TOURISM

Guatemala's privileged geographic position, political stability, natural and cultural richness and its climate of "eternal spring" are competitive advantages that makes the country an attractive travel destination. Unlike the other Central American countries, Guatemala provide a comprehensive supply and have a large variety of high quality tourism segments, such as:

- Archeology
- Colonial History and Legacy
- Indigenous culture and communities
- Volcanoes 16
- Fishing
- Ecotourism and adventure
- Beaches on the Atlantic and Pacific coast

MAIN AREAS FOR TOURISM DEVELOPMENT

Antigua Guatemala

Antigua, were declared "World Heritage" by UNESCO (1979); is the most outstanding and best preserved Colonial City in all Spanish America.

Peten, Mayan World

Tikal National Park is declared "World Heritage" by UNESCO in 1979 and these is the second tourist site most visited in Guatemala, along with Lake Atitlan. The Petén rainforest's Mirador Basin is the last tract of virgin rainforest remaining in Central America.

Caribbean Coast: Izabal

There is an short distance from Quirigua, declared "World Heritage" by UNESCO (1981), Tikal National Park (Petén), Belize Keys & other Caribbean Islands.

Atitlan Lake

The Lake of Atitlan is the second tourism site most visited in the country.

Guatemala City

Guatemala City is the most cosmopolitan and contemporary of all Central America. This are very favorable for businesses and conventions. For this reason, many multinational firms establishes its headquarters for the Latin and/or Central American region in Guatemala

HISTORY OF ENGINEERING

Engineering

Engineering has been defined as the creative application of “scientific principles to design or develop structures, machines, apparatus, or manufacturing processes, or works utilizing them singly or in combination; or to construct or operate the same with full cognizance of their design; or to forecast their behavior under specific operating conditions; all as respects an intended function, economics of operation and safety to life and property.

The words engine and ingenious are derived from the same Latin root, *ingenerare*, which means “to create.” The early English verb *engine* meant “to contrive.”

Engineering is based principally on physics, chemistry, and mathematics and their extensions into materials science, solid and fluid mechanics, thermodynamics, transfer and rate processes, and systems analysis. Unlike the scientist, the engineer is not free to select the problem that interests him; he must solve problems as they arise; his solution must satisfy conflicting requirements.

Engineers employ two types of natural resources, materials and energy. Materials are useful because of their properties: their strength, ease of fabrication, lightness, or durability; their ability to insulate or conduct; their chemical, electrical, or acoustical properties. Important sources of energy include fossil fuels (coal, petroleum, gas), wind, sunlight, falling water, and nuclear fission.

History

The first engineer known by name and achievement is Imhotep, builder of the Step Pyramid at Saqqārah, Egypt, probably in about 2550 bc.

In Asia, engineering had a separate but very similar development, with more and more sophisticated techniques of construction, hydraulics, and metallurgy helping to create advanced civilizations such as the Mongol empire, whose large, beautiful cities impressed Marco Polo in the 13th century.

Civil engineering emerged as a separate discipline in the 18th century, when the first professional societies and schools of engineering were founded.

England and Scotland were the birthplace of mechanical engineering, as a derivation of the inventions of the Scottish engineer James Watt and the textile machinists of the Industrial Revolution.

The growth of knowledge of electricity from Alessandro Volta’s original electric cell of 1800 through the experiments of Michael Faraday and others, culminating in 1872 in the Gramme

dynamo and electric motor (named after the Belgian Z.T. Gramme) led to the development of electrical and electronics engineering.

Chemical engineering grew out of the 19th century proliferation of industrial processes involving chemical reactions in metallurgy, food, textiles, and many other areas. By 1880 the use of chemicals in manufacturing had created an industry whose function was the mass production of chemicals.

GLOSSARY Page. 17

- Agribusiness: Agroindustria
- Apparel: Vestir
- Commitment: Compromiso
- Competitive: Competitivo
- Exporter: Deportista
- Feasibility: Factibilidad
- Foreign: Extrangero
- Framework: Estructura
- Income: Ingreso
- Infrastructure: Infraestructura
- Landscape: Paisaje
- Long-term strategy: Estrategia a largo plazo
- Manufacture: Fabricar
- Market: Mercado
- Market intelligence: Inteligencia de mercado
- Platform: Plataforma
- Policy: Política
- Position: Posición
- Production: Producción
- Profitability: Rentabilidad
- Revenue: Ingresos
- Salary: Salario
- Seaport: Puerto marítimo
- Wage: Sueldo

MATCHING SECTION IN PAGE 14

1. The various businesses collectively that process, seaport distribute, and support farm products.
R//AGRIBUSINESS
2. The quality of being doable or usable. R// FEASIBILITY
3. Strategy that is extending over a long time. R// LONG-TERM STRATEGY
4. A group of the same or similar elements gathered or occurring closely together. R//CLUSTERS
5. Money that is invested with an expectation of profit. R// INVESTMENT
6. International trader. R// EXPORTER
7. Sufficiently low in price or high in quality to be successful against commercial rivals. R// COMPETITIVE
8. Manufacturing or growing something (usually in large quantities) for sale. R// PRODUCTION
9. The trading or selling opportunities provided by a particular group of people. R// MARKETS
10. A port or harbor accessible to seagoing vessels. R// SEAPORT

Worksheet No. 1 (Measurement)

1. If one paperclip has the mass of 1 gram and 1,000 paperclips have a mass of 1 kilogram, how many kilograms are 8,000 paperclips? 8 kilograms.
2. How many pounds of ground beef should you buy to make 120 hamburgers, if each burger patty will weigh 5 ounces before cooking? 33.333 pounds
3. To get electrical power to an air compressor, 60 feet of wire is needed. A 15-meter roll of wire is to be used. Will there be a sufficient amount of wire to complete the job? since 30 feet is more than 15 meters if there is enough
4. As you travel along a highway you notice the mile markers and reflectors along the side of the road. There are 21 reflectors between the mile markers. If the reflectors are equally spaced, how many feet are between each reflector?
there are 251 feet
5. A cold medication indicates that an adult should take a one-half fluid ounce dose. An adult patient calls the pharmacy and says he only has a small medicine cup labeled in milliliters. How many milliliters should the pharmacy tell him to take for a correct dosage? 15 ounces
6. If Pete drove 300 miles at a rate of 50 miles per hour, find the number of hours Pete traveled. are $300/50 = 6$ hours
7. Sue walked to her school at 2 miles per hour, picked up her bicycle and rode back home at 10 miles per hour. If the round trip took 1.5 hours, how far is the school from Sue's home? 0.75 miles
8. A copier takes 4 minutes to duplicate 480 pages. Express the rate at which the copier duplicates, in pages per second. $480 \text{ pages} / 4 \text{ minutes} = 120 \text{ pages per minute}$
9. A car uses 18 gallons of gasoline to travel 558 miles. How far can the car travel on 12 gallons of gasoline? $12/18 * 558 = 372$ miles.

Worksheet No. 2 (Measurement)

1. At what hour you wake up? How do you know it?
what time do my classes start
2. About how much juice do you drink every day?
I regularly don't drink juice until noon, I drink 1 liter
3. What is the distance in miles from your home to University?
approximately 15 miles
4. What's the typical speed limit around town?
the speed limit is 50 kilometers per hour
5. What's the typical speed limit on the highway? (if you take the highway)
the limit is 70 kilometers per hour
6. Estimate how much your backpack weighs on a typical afternoon.
usually weighs about 10 pounds

TECHNOLOGY WORKSHEET

ID	NAME
201123201	Vanessa Elizabeth Torres Lopez
201903767	Carlos Estuardo Monterroso Santos
201908113	Eddy 1david Cartagena Ajquijay
202103984	Esvin Aldai Ixcotoyac Cux
202100081	Javier Andrés Monjes Solórzano

WHAT IS TECHNOLOGY? (WITH YOUR OWN WORDS)

Technology is:

Technology is a response to man's desire to transform the environment and improve the quality of life, which includes knowledge and techniques developed over time that are used in an organized manner to satisfy some need. It can be summarized that technology is the set of knowledge and techniques that are applied in an orderly manner to achieve a certain objective or solve a problem.

WHAT IS SCIENCE? (WITH YOUR OWN WORDS)

Science is:

Science covers all aspects of life, it is the explanation to everything that surrounds us, and gives us answers to all kinds of questions we ask ourselves every day, for example: Where do humans come from, why does it rain? Science through its principles and laws generate truth. Set of knowledge obtained through observation and reasoning, systematically structured and from which general principles and laws with predictive and experimentally verifiable capacity is deduced.

HUMAN NEEDS AND WANTS

	DEFINITION	EXAMPLES
NEEDS	They are those things that human beings need to live a full and healthy life. Among them there are several types of humans needs	<ul style="list-style-type: none">• sleeping,• eating,• breathing.• To respect oneself.• Relating with friends and establishing new bonds of friendship.• Having a partner or family.
WANTS	It is the interest that a person must achieve something. It is the consequence of an emotion whose objective is to generate action in an individual to achieve his or her goal. Therefore, the desire aims to fulfill an objective or a will.	<ul style="list-style-type: none">• A project that is useful to society.• Own your own idea.• Generate impact in their community.• Buy a more powerful car

DIFFERENCES BETWEEN SCIENCE VS TECHNOLOGY (with your own words)

SCIENCE STUDIES...	TECHNOLOGY STUDIES...
<ul style="list-style-type: none">• science studies natural phenomena• Science is based on the scientific method as a research strategy.	<ul style="list-style-type: none">• makes use of natural phenomena• technology can be a method, a process or a piece of equipment.

List 3 technological devices that solve your daily problems. Explain.

Technological device	How does it solve your problems?
Fridge	As it is intended to preserve food, it helps us to conserve it for a longer period of time while consuming it.
Laptop	You can work from anywhere, solving the problems of today which are like virtual classes this helps us to receive them at the same time perform different tasks on it.
Wireless charger	By placing your phone on the charger to start charging it allows you to quickly charge your smartphone, without cables, tangles or waiting.

List 3 technological devices that create problems in your life. Explain.

Technological device	How does it create a problem or inconvenience?
Smartphone	The disadvantages that it can present is the loss of the time that one gives since one does not control the time.
Router	The disadvantages are sometimes the bad connection that it can give us when we are surfing the net.
Printer	The problems that can occur when connected to the network and this fails if you want to print a document, you will have to use the cable.



<http://www.USScouts.Org> • <http://www.MeritBadge.Org>

- [illegible]

[illegible]

Engineering

In a paragraph, summarize your learning and understanding of engineering

2. Select an engineering achievement that has had a major impact on society.

Using resources such as the Internet, books, and magazines, find out about the engineers who made this engineering feat possible, the special obstacles they had to overcome, and how this achievement has influenced the world today.

Engineers:

Pier Giorgio Perotto - computer electrical engineer.

Obstacles:

Influence:

Engineering

3. Explain the work of six types of engineers.

[illegible]

Pick two of the six and explain how their work is related.

Engineering

4. Find out about three career opportunities in engineering.

1.	
2.	
3.	

Pick one and research the education, training, and experience required for this profession.

Career:	
Education:	
Training:	
Experience:	

Explain why this profession might interest you.
