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–T L E M C E N–

وزارة التعليم العالي والبحث العلمي

المدرسة العليا في العلوم التطبيقية
-تلمسان-

ESSA- Tlemcen

2nd Cycle

English for Electrical Engineering, course

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Foreword

ESP has become one of the most significant fields in higher education. As a matter of fact, English is learnt for many reasons which are due to a large variety of professions which request the use of ESP. The need to use English for specific purposes specialities has many characteristics. One of the reasons for learning English is for science and technology, therefore, ESP can be subdivided into two fundamentals sorts of ESP differentiated according to learners' need. It means that ESP is divided into Academic study or for occupational purposes. As the Higher School of Applied Sciences comprises different branches of engineering more precisely Electrical Engineering; it is necessary to clarify and shed light on our English lectures. Therefore, we will explain and detail our lectures in the following handout.

Understanding and mastering ESP is crucial for students in electrical engineering to excel academically and professionally. This handout outlines the structure and objectives of our English lectures, aimed at equipping students with the necessary language skills to thrive in their specific field. By focusing on technical vocabulary, reading comprehension, writing, and oral communication, we prepare our students to meet the demands of their profession and contribute effectively to the global scientific community.

The present handout of Electrical Engineering module is composed of five units which are as follows:

Unit One: Introduction to electrical Engineering

Unit Two: Renewable Energies

Unit Three: Electricity and Electronics

Unit Four: Charts/ Writing a CV and Formal E-MAIL

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UNIT ONE

1- INTRODUCTION TO ENGINEERING

Engineers solve problems using math, science, and technology. They also design products that are useful for humans. To become an engineer you need a degree in Engineering that will provide you with a broad background in math, science, and technology, as engineers use these skills to solve problems on a daily basis. Besides the broad background, engineering students also choose a specialisation in some branches of engineering. Engineers in each branch have knowledge and skills that can be applied to many fields and can contribute to solve many different types of problems. Since many engineering projects encompass multiple problems to solve, engineers in one field often work closely with specialists in other fields, including scientists.

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.

Engineering as a profession involves different tasks. It can refer specifically to the manufacture or assembly of engines, machine tools and machine parts. It is also used more generally to describe the creative application of scientific principIes to design, develop, construct and forecast the behaviour of structures, apparatus, machines, manufacturing processes and works. The function of scientists is to know, while that of engineers is to do: they must solve specific problems.

Task One : answer the following questions fro the text

1- What is engineering based on ?

2- What is the task of an engineer ?

3- What does the word encompass mean ? (choose the right one)

Realize/ include / make

4- What does the word forecast mean ?

Find/ predict/ improve

Task Two: Complete the foIlowing sentences with a form of the word in brackets.

1- In the …….industry,…….develop processes for producing plastics, fibres, medicines, etc. from simple chemicals. (chemistry)

2- Producing steel using the Bessemer process is one of the best-known……. processes. (industry)

3- Most..... devices need oil as a lubricant. (mechanics)

4- FoIlowing the earthquake. every building had to be inspected to see whether it had suffered any ..... damage. (structure)

5- Certain chemicals are added to glue to.....it. (hard)

6 Excavators and power shovels are two types of equipment used by ……..when they are removing ROCKS from the ground. (mine)

Task Three : complete the extract with the appropriate words

Production, chemical, machines, highway, physics, develop, electrical ,electronic, civil mechanical

Engineering students should have an understanding of maths, (a)…… and chemistry. Working with pharmaceuticals, food, mineral processing and chemical manutacturing, a (b)……engineer is trained to understand, design, control, and investigate material flows. If you enjoy problem solving and find projects such as the Channel Tunnel and the Three Gorges Dam interesting, (c)……engineering may be for you. You will produce creative designs at an economical price while paying due concern to the environment. If your interest is in road building then you may decide to follow a specialised course in (d)…….. engineering. By studying (e) ..... and (f)…….. Engineering you learn about the design of complete systems, such as computers, controllers, power and transport systems.(g)…….. engineers plan, design and (h)…….. a wide range of things: washing machines, cars and spacecraft.(i)…… engineers work very closely with mechanical engineers, to make new products at the right price, on time and in the correct quantity. As well as designing and selecting (j)……. and materials, they also organise people and finance.

Key Answer

Task One :

1- 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.
2- The task of an engineer is to
3- Encompass means « include »
4- The word forecast means « predict »

Task two : Complete the foIlowing sentences with a form of the word in brackets.

1- In the ……CHEMICAL…….industry,…CHEMISTS…….develop processes for producing plastics, fibres, medicines, etc. from simple chemicals. (chemistry)

2- Producing steel using the Bessemer process is one of the best-known……INDUSTRIAL ..... processes. (industry)

3- Most……MECHANICAL.....devices need oil as a lubricant. (mechanics)

4- FoIlowing the earthquake. every building had to be inspected to see whether it had suffered any……STRUCTURAL .....damage. (structure)

5- Certain chemicals are added to glue to……HARDEN…. .....it. (hard)

6 Excavators and power shovels are two types of equipment used by MINERS MINING..... when they are removing ROCKS from the ground. (mine)

Task Three :

Engineering students shoutd have an understanding of maths, (a)…***physics*** ..... and chemistry. Working with pharmaceuticals, food, mineral processing and chemical manutacturing, a (b)……***chemical***……engineer is trained to understand, design, control, and investigate material flows. If you enjoy problem solving and find projects such as the Channel Tunnel and the Three Gorges Dam interesting, (c)…***civil.....***engineering may be for you. You will produce creative designs at an economical price white paying due concern to the environment. If your interest is in road building then you may decide to follow a specialised course in (d***……highway……...*** engineering. By studying (e)……***electronic***…… and (f)…***electrical…***…….. Engineering you learn about the design of complete systems, such as computers, controllers, power and transport systems. (g)……***mechanical***…….. engineers plan, design and (h)……***develop***…….. a wide range ot things: washing machines, cars and spacecraft.(i)……***production…***…… engineers work very closely with mechanical engineers, to make new products at the right price, on time and in the correct quantity. As wetl as designing and selecting (j)……***machines***.....and materials, they also organise people and finance.

TEXT TWO/
THE ENGINEERING PROFESSION

What is engineering ? It offers solutions for real human problems by the development and application of tools, machines, materials, goods, or information in the form of ski
lls, knowledge, processes, blueprints, plans, diagrams, models, formulae, tables, engineering designs, specifications, manuals, or instructions. What is the work of an engineer ? An engineer **designs, operates**, or **maintains** certain kinds of equipment, **deals with** the practical application of theoretical findings. Engineers **apply** the principles of science and mathematics to develop economical solutions to technical problems. Their work is the link between social needs and commercial applications.

However, what an engineer did in the past, may seem strange and funny today. You know that in the past engineers did not go to school, don't you ? They just worked for a number of years to be taught certain skills. But, that's ancient history, times have drastically changed.

Today's engineers require at least a **three-** or **five-year university course** in order to graduate at a college or to get a bachelor's degree in engineering and become specialists in their fields. This does not mean that, taking their degree, the education is finished. **Continuing education**, or as it has been called lately **lifelong learning**, is critical for engineers wishing to enhance their value to employers as technology evolves. They have to cover different fields, incorporate their ideas into the real world, listen to the needs, and be familiar with the global economic situation.

Therefore, when engineers start developing a new product, they have to consider many factors. For example, in developing **an industrial robot**, engineers precisely specify the **functional requirements ; design** and **test** the robot's components ; **integrate** the components to produce the final design ; and **evaluate** the design's overall **effectiveness, cost, reliability, and safety**. This process applies to the development of many different products, such as chemicals, computers, gas turbines, helicopters, and toys.

In addition to design and development, many engineers work in testing, production, or maintenance. These engineers **supervise** production in factories, **determine** the causes of component failure, and **test** manufactured products to **maintain quality**. They also **estimate the time** and **cost** to complete projects. Some move into **engineering management** or into **sales**. In sales, an engineering background enables them to **discuss technical aspects** and assist in **product planning**, **installation**, and **use**. **Supervisory engineers** are responsible for major components or entire projects.

Engineers use computers extensively to **produce and analyse designs** ; to **simulate** and **test** how a machine, structure, or system operates ; and to **generate** specifications for parts. Many engineers also use computers to **monitor product quality** and **control process efficiency**. The field of nanotechnology, which involves the creation of high-performance materials and components by integrating atoms and molecules, also is introducing entirely new principles to the design process.

Most engineers specialize. Numerous specialties are recognized by professional societies, and the major branches of engineering have numerous subdivisions. Some examples include structural and transportation engineering, which are subdivisions of civil engineering ; and ceramic, metallurgical, and polymer engineering, which are subdivisions of materials engineering. Engineers also may specialize in one industry, such as motor vehicles, or in one type of technology, such as turbines or semiconductor materials.

Task One : FILL IN THE BLANK SPACES WITH THE CORRESPONDING ENGINEERING PROFESSION **:**

1) a person whose job involves designing and building of houses, roads, bridges is a _____engineer

2) a person who designs and builds machines and systems that use or produce electricity is an _____engineer

3) a person whose job is to design, build and repair machines is a _____ engineer

4) a person who writes computer programs is a _____engineer

5) a person who works in a recording or a broadcasting studio and controls the levels and balance of sound is a _____engineer.

Task Two : discuss with your mates the following points (oral discussion)

1. What is engineering ?
2. What is the work of an engineer ?
3. What is the difference between today's engineers and those in the past ?
4. Why is continuous education an imperative for engineers ?
5. What tasks does a supervisory engineer perform ?
6. What do engineers use computers for ?
7. Where would you like to work ?
8. What would you like to specialize in ?

Key Answer :

Task One :

1- Civil Engineer

2- Electrical Engineer

3- Mechanical Engineer

4- Computer engineer

5- Technical Enginner

Task Two : Debate

UNIT TWO / RENEWABLE ENERGIES

TEXT 1/- RENEWABLE ENERGIES

Read the following text about renewables.

Renewable energy originates from resources that are practically inexhaustible in relation to human needs. For instance, the sun, as the source of solar and most other forms of renewable energy, will continue to shine for some billions of years. Strictly speaking, however, the term "renewable" is not correct, as energy can neither be consumed nor renewed: according to the law of the conservation of energy, the total energy of a closed system remains constant. Using renewable energy therefore means partly redirecting natural energy flows to make them usable for human purposes.

Fossil fuel reserves like coal, petroleum and natural gas are limited in their future availability. Moreover, their use makes many European countries dependent on imports. They are also associated with significant CO2 emissions and thus contributes to global warming. An increase in the use of renewable energy as a proportion of total energy use is therefore planned in Europe and worldwide.

Renewable energy, also referred to as sustainable energy, saves resources and protects the climate. However, some forms of it are not available for energy generation on a steady basis, but are instead subject to considerable fluctuations depending on the time of day, season and region: the sun does not always shine, nor does the wind always blow. Only renewable biomass and geothermal energy can be used to supply base load power, i.e. to ensure continuous supply.

In the future, renewable energy will contribute significantly to the energy mix. It will be important to combine those forms of renewable energy that fluctuate in availability, like solar and wind power, with resources capable of supplying base load power. So-called "hybrid power plants", which make use of various energy resources, might be a feasible solution. Such power plants may work with solar thermal energy during the day and with geothermal energy during the night. It may also be possible to combine this with biomass power.

The argument basically goes like this. When the wind isn't blowing and the sun isn't shining, renewables like solar and wind aren't producing electricity. What happens during that time when we need energy? We need something more reliable — something that produces electricity all the time and that we can rely on. That's baseload power, provided by reliable sources such as nuclear and coal fire power plants.

Task One . Word Fields **:** *One word does not fit with the other three. Decide and click on the word.*

1. Inexhaustible, endless, boundless, limited
2. Save, consume, use, deplete
3. Constant, sustained, changing, persistent
4. Gas, petroleum, biomass, oil
5. Resource, reservoir, stockpile, outlay
6. Distribute, contribute, supply, furnish
7. Propotion, size, percentage, part
8. Different, various, diverse, homogenous
9. Diminish, expand, increase, enlarge
10. Sustain, perpetual, remit, prolong

Task Two : complete the following sentences using words from the list

Energy mix- solar- renewable energy- subject- baseload- hybrid- closed- emissions- fossil fuels- biomass- wind

1- CO2 ..... contribute to global warming.
2- In the future, renewable energy will contribute to the country's……..
3- A term sometimes used for sustainable energy is……
4- Some forms of energy such as the wind blowing or the sun shining are.....to high fluctuations.
5- The term…….refers to the constant load needed by a system to cover minimum needs.
6- The text states that only……..or geothermal energy can be used to supply the base load.
7- .....power plants make use of various energy forms.
8- According to the laws of energy, in a.....system energy is neither produced nor lost.
9- Neither……..nor .....energy is constant enough to provide for the baseload.
10- The main or sole use of……..makes many countries dependent upon the import of energy sources.

Task Three : complete the following table

Infinitive	Regular/irregular	Past	Past participle
To arrise			
To bear			
To choose			
To contribute			
To cost			
To drive			
To deploy			
To do			
To forecast			
To flow			
To freeze			
To generate			
To include			
To keep			
To know			
To shake			
To shrink			
To spend			
To spoil			
To stand			
To steal			
To think			
To throw			

Task Four : identify the type of energy or resource in the following statements

_____ a. This type of energy is from ancient swamps and is mined to produce the most amount of electricity.

_____ b. This type of resource uses materials that were living (organic material) and changes it by fermentation, conversion of gas and bacterial decay.

_____ c. This type of energy uses photovoltaic cells to produce electricity.

_____ d. This type of energy uses the heated water from the earth's core.

_____ e. This type of energy uses the air in motion from the uneven heating of the earth to heat or produce electricity.

_____ _____ f. This type of energy uses the kinetic energy of the water.

_____ g. This type of energy is a fossil fuel and is refined from crude oil making types of fuel and thousands of products.

_____ h. This type of energy is found by itself, or in petroleum or coal beds.

_____ i. This type of energy involves the nucleus of a atom.

Answer key

Task One : limited/ save/ changing/ biomass/ outlay/ contribute/ size/ homogeneous/ diminish/remit

Task Two : emissions/ energy mix/ renewable energy/ subject/ base load/ biomass/ hybrid/ closed/ solar/wind/ fossil fuels

Task three : revision

Task Four : coal- biomass- solar- geothermal- wind- hydrpower- petroleum- propane- nuclear

TEXT /2 ENERGY

Forms of Energy

The effects of energy can be seen, felt or heard in different ways, depending on the form of energy in question. The main forms are listed below :

• kinetic energy : energy in the form of movement – a type of mechanical energy
• thermal energy : energy in the form of heat
• electrical energy : the energy of an electric current
• sound energy : energy in the form of noise
• light energy : for example, light emitted from the sun or from a light bulb
• chemical energy : energy within substances that can produce a chemical reaction
• nuclear energy : energy from an atomic reaction.

Energy cannot be created or destroyed, only converted from one form to another. For example, in a torch powered by batteries, chemical energy stored in the batteries is converted to electrical energy, and the electrical energy is converted to light energy.

Mechanical energy can be stored as potential energy. An example is a load, lifted by a crane and suspended at a high level. The weight has the potential (in the future) to be released and allowed to fall, becoming kinetic energy. Energy can also be stored when a component is elastically deformed. This is called strain energy. An example is the spring in a watch, which is wound up, then progressively unwinds.

Energy efficiency

Machines often convert an energy source, such as electricity, to another form of useful energy – in other words, energy used for a purpose. For example, a motor converts electrical energy (the energy source) into kinetic energy (useful energy). But it also converts some energy into heat and noise.

As this will be dissipated into the air, and not used, it is waste energy.

A motor : electrical energy ~ useful kinetic energy ~ wasted thermal and sound energy

If a machine converts a high percentage of energy into useful energy, it is efficient. For example, if a motor converts 7 5% of the electrical energy it consumes into kinetic energy, and wastes 25% as thermal and sound energy, it is seventy-five percent efficient. Improving efficiency – making efficiency gains – is a key focus in engineering.

Work and power

The amount of energy needed to do a task – for example, lifting a load to a certain height by crane – is called work. The amount of energy converted in order to perform tasks – in other words, the amount of work done- is measured in joules **(J).** If a force of one newton is required to keep an object moving, the work required to move that object over a distance of one metre is equal to one joule.

The speed, or rate, at which work is done is called power, and is measured in watts (W). One watt is one joule per second. Power, in watts, is often referred to as wattage. A powerful motor will have a higher wattage than a less powerful one.

Activity One : Make word combinations with *energy* using words from A and B opposite. Then match the combinations with the descriptions (1-8).

1 .....energy= energy stored within the liquids or solids in a battery
2 .....energy = mechanical energy in the form of movement
3 .....energy = potential energy stored in a deformed material
4 .....energy= energy converted to the form required for a purpose
5 .....energy= energy converted to a form that cannot be used
6 .....energy = the form of energy that shines, and can be seen
7 .....energy= the form of energy that can be heard
8 .....energy= energy that results in an increase in temperature

Activity Two : Complete the article about electric and diesel-electric locomotives using the words in the box.

Chemical- convert- dissipate- efficiency- efficient- electrical- form- gain- joules- kinetic- power- powered- powerful- source- stored- thermal- useful- waste- wattage- work

An electric locomotive is one that is (1) .....by an external energy (2) …..... , most often via overhead electric lines. This differs from a diesel-electric locomotive, which has an onboard fuel tank and a diesel-powered generator to provide electricity for its motors. Purely electric power has numerous advantages over diesel-electric power, explaining the choice of electric locomotives for use in high-speed trains.

Firstly, an electric locomotive needs to carry neither a generator nor fuel. Its mass is therefore lower than a diesel-electric equivalent. This results in a significant efficiency (3) …..... ,as the electric locomotive's smaller mass means less (4) …..... . is done – measured as a total number of (5).....on a given journey. For a comparable rate of acceleration, its motors are also required to provide less (6) …..... . As they use a lower (7) …..... ,this means less (8) …..... .. motors can be used, making them smaller, thus further reducing weight and improving (9)..... In addition, electric locomotives use only (10) …..... energy.

This means there is no need to (11) …..... energy from one (12) …..... to another on board the train (electricity can be generated more efficiently in power stations). In a diesel-electric unit, the energy conversion process starts with (13) …..... .. energy, which is (14) …..... within the hydro-carbon compounds of diesel. This fuel is
burned to produce (15) …..... energy, and the heat is then converted by the engine into (16) .....energy, which provides the movement to drive the train. This process is a very long way from being 100% (17) …..... – only a small percentage of the initial chemical energy is converted to the (18) ..... energy that is actually used to drive the train, with a significant percentage being (19) …..... into the air in the form
of heat, constituting (20) ..... energy.

Key Answer :

Activity one : chemical- kinetic -Strain –useful- waste- light- sound- thermal

Activity Two : powered- source- Gain- work- joules- power- wattage- powerful- efficiency- electrical- convert- form- chemical- stored- thermal- kinetic- efficient- useful- dissipated- waste

GLOBAL WARMING

Experts in climatology and other scientists are extremely concerned about the changes to our climate. Admittedly, climate changes have occurred on our planet before. For example: there had been several ice ages or glacial periods.

These changes were different from the modern ones because they occurred gradually and naturally. The current changes aren't the result of natural causes, but of human activity. Furthermore, the changes are occurring alarmingly rapid.

The major problem is perhaps, that the planet is warming up. According to some experts, this warming, known as global warming, has been occurring in the last 10,000 years. The implications for the planet are very serious. Rising global temperatures could give rise to such ecological disasters such as floods and droughts. This could have a harmful effect on agriculture.

This unusual warming of the earth has been caused partly by so- called greenhouse gases, such as carbon dioxide, being emitted into the atmosphere by car engines and modern industrial processes, for example. Such gases, not only add to the pollution of the atmosphere, but also create a greenhouse effect, by which the heat of sun is trapped. This leads to the warming up of the planet.

Politicians are also concerned about climate change and there are now regular meetings on the subject, attended by representatives from many of the world's industrialized countries. In Kyoto, Japan in 1997, it was agreed that the most industrialized countries would try to reduce the volume of greenhouse gas emissions and were given targets for their reductions.

It was also suggested that more forests should be planted to create so- called "sinks" to absorb greenhouse gases. At least part of the problem of rapid climate change has been caused by too drastic deforestation.

Sadly the targets are not being met. Even more sadly, global warnings about climate changes are often still being regarded as scaremongering.

<u>Activity one</u> : Answer these questions

1. What climate changes have taken place before the present time?

……
……

2. What are the main differences between modern climate changes and the ones that occurred in the past?

……

3. What were the agreements reached in the summit in Tokyo?

……

4. Which suggestions were made and why?

……

Express your opinion: Is global warming true or false? Give reasons.

……

…….....

UN - We can control Global Warming

A United Nations **committee** on climate change has said we can control global warming. The **panel**, made up of **representatives** from over _____countries, believes we can _____the harm *greenhouse gases* do to the **atmosphere**. The panel said that we can keep our Earth safe by changing the way we use _____around the world. Most important is to _____ more fuel-**efficient** vehicles and household **goods**. For this to happen, individuals need to change their _____and spending patterns.

The committee _____that it would cost less than _____of world economic **output** by 2030. The "big problem" is the damage rising temperatures are doing to the Earth. Increased floods, **droughts**, rising sea levels, more violent and destructive storms and **extinctions** of _____are just a few things threatening the life of our planet. The report _____the **urgent** need for introducing a wide variety of _____technologies. Harlan Watson, head of the U.S. team, warned: "If we continue to do what we are doing, then we are in _____."

1) Vocabulary

1. Committee	a. the mixture of gases that surrounds the Earth
2. Panel	b. someone who has been chosen to speak, vote, or make decisions
3. Representative	c. the money, goods or work made
4. Greenhouse gas etc	d. a group of people chosen to do a job, make decisions
5. Atmosphere	e. things that are made to be sold, products
6. Efficient	f. very important and needing to be dealt with immediately
7. Goods	g. a gas, such as carbon dioxide, that traps heat above the Earth
8. Output	h. a group of experts who answer questions about a topic
9. Drought	i. when a particular type of animal or plant stops existing
10. Extinction	j. to work well without wasting time, money, or energy
11. Urgent	k. dry weather, not enough water for plants and animals to live

2) Questions

1. What is this article about?

2. What is global warming? What are some of the causes?

3. What did the UN committee decide? Why is their decision important?

4. What is the “big problem”?

5. What did Harlan Watson say about global warming?

6. What do you think about global warming

Key answer

UN - We can control Global Warming

A United Nations **committee** on climate change has said we can control global warming. The **panel**, made up of **representatives** from over **120** countries, believes we can **limit** the harm *greenhouse gases* do to the **atmosphere**. The panel said that we can keep our Earth safe by changing the way we use **energy** around the world. Most important is to **introduce** more fuel-**efficient** vehicles and household **goods**. For this to happen, individuals need to change their **lifestyles** and spending patterns.

The committee **calculated** that it would cost less than **three percent** of world economic **output** by 2030. The "big problem" is the damage rising temperatures are doing to the Earth. Increased floods, **droughts**, rising sea levels, more violent and destructive storms and **extinctions** of **species** are just a few things threatening the life of our planet. The report **stressed** the **urgent** need for introducing a wide variety of **clean** technologies. Harlan Watson, head of the U.S. team, warned: "If we continue to do what we are doing, then we are in **deep trouble**."

1) Vocabulary

1. Committee D	a. the mixture of gases that surrounds the Earth
2. Panel H	b. someone who has been chosen to speak, vote, or make decisions
3. Representative B	c. the money, goods or work made
4. Greenhouse gas G	d. a group of people chosen to do a job, make decisions etc
5. Atmosphere A	e. things that are made to be sold, products
6. Efficient J	f. very important and needing to be dealt with immediately
7. Goods E	g. a gas, such as carbon dioxide, that traps heat above the Earth
8. Output C	h. a group of experts who answer questions about a topic
9. Drought K	i. when a particular type of animal or plant stops existing
10. Extinction I	j. to work well without wasting time, money, or energy

11. Urgent F k. dry weather, not enough water for plants and animals to live

Activity Three: Climate change vocabulary 1. Match the words from the texts to the definitions below.

Climate change/ Carbon dioxide/ atmosphere/ greenhouse effect/ rise/ global warming/ emissions/ electrical appliances/ greenhouse gases/ ecosystems/ extinction/

1. The process in which gases in the atmosphere trap the sun's heat.
2. The types of gases that trap the sun's warmth in the atmosphere.
3. A greenhouse gas with the chemical name CO2.
4. A change in the earth's climate over a period of time.
5. When the average temperature on Earth is getting hotter.
6. A verb or noun which is a synonym of increase.
7. The scientific word for 'air'.
8. Greenhouse gases caused by human activity.
9. A system of plants and animals living together.
10. When a type of plant or animal disappears completely.
11. Televisions, fridges and other electrical goods.

Key answer

1. The process in which gases in the atmosphere trap the sun's heat. **Greenhouse effect**
2. The types of gases that trap the sun's warmth in the atmosphere. **Greenhouse gases**
3. A greenhouse gas with the chemical name CO2. **Carbon dioxide**
4. A change in the earth's climate over a period of time. **Climate change**
5. When the average temperature on Earth is getting hotter. **Global warming**
6. A verb or noun which is a synonym of increase. **Rise**
7. The scientific word for 'air'. **atmosphere**
8. Greenhouse gases caused by human activity**. Emissions**
9. A system of plants and animals living together. **Ecosystem**
10. When a type of plant or animal disappears completely. **Extinction**
11. Televisions, fridges and other electrical goods. **Electrical appliances**

TEXT 4/

SUSTAINABLE DEVELOPMENT

The best definition of Sustainable development was presented by the report *Our Common Future* (also known as the Brundtland Report):

"Sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs."

Sustainable development is thus the ability to meet the needs of the present while contributing to the future generations' needs. It focuses on two goals :

1. To improve the quality of life for all of the Earth's citizens.
2. To stop using up the natural resources beyond the capacity of the environment to supply them indefinitely.

Green development is generally differentiated from sustainable development in that Green development prioritizes what its proponents consider to be environmental sustainability over economic and cultural considerations. In addition to that, sustainable development has underlying concepts : the concept of 'needs', in particular the essential needs of the world's poor, to which overriding priority should be given; and the idea of limitations imposed by the state of technology and social organization on the environment's ability to meet present and future needs. There is an additional focus on the present generations' responsibility to improve the future generations' life by restoring the previous ecosystem damage and resisting to contribute to further ecosystem damage.

Sustainable development requires action on the part of world states, governments and people. The detrimental situation of the environment, the enormous stress upon our natural resources and the huge gap between developed and underdeveloped countries, necessitate practical strategies to reverse the trends. The World Commission on Environment and Development suggested seven critical objectives for environment and development policies that follow from the concept of sustainable development:

- Reviving growth
- Changing the quality of growth
- Meeting essential needs and aspirations for jobs, food, energy, water and sanitation
- Ensuring a sustainable level of population
- Conserving and enhancing the resource base
- Reorienting technology and manage risk
- Including and combining environment and economics considerations in decision-making

These recommendations are still valid; not to do things differently is dangerous and condemnable. Slow actions would be detrimental.

Task One : answer the following questions

1. What does Sustainable development refer to ?……
   ……..
2. What differentiates green development from sustainable one ?
   ……
   ……
3. According to you, what is the best definition of sustainable development
   ……
   ……

Task Two: Match the definitions (a–j) withthe vocabulary (1–10)

Vocabulary	**Definition**
1. …… fossil fuels	a. to pay part of the cost of something
2. …… fumes	b. to go down in amount very quickly and suddenly
3. …… abundant	c. an unwanted or unexpected result
4. …… the grid	d. more than enough
5. …… to subsidise	e. trade in large quantities of substances or products such as oil
6. …… greenhouse gases	f. gases, especially carbon dioxide, that prevent heat from the earth escaping into space
7. …… to plummet	g. fuels, such as gas, coal and oil, that were formed underground millions of years ago
8. …… a commodity market	h. to reduce carbon dioxide emissions and global warming
9. …… to bend the curve of emissions	i. strong, unpleasant and sometimes dangerous gas or smoke
10.…… a side effect	j. connection to the main supply of electricity, water, etc.

Task Three: Complete the sentences with the words in the box.

Challenges- dangers- emissions- energy system- Fossil fuels - global transformation- subsidise- wind power

1. Governments will save money if they no longer ..... fossil-fuel production.

2. Our.....is undergoing an unstoppable transformation.

3. The coal-fired power industry is being rapidly replaced by sun and …….

4. Our collective mission is to bend the curve of ……

5.....have made an extraordinary contribution to humanity.

6. Now that we understand the.....of fossil fuels, we should no longer use them.

7. The journey to a fossil-fuel-free future is the most exciting ….....we have ever seen.

8. Renewable energy is the answer to so many .....in the world.

UNIT THREE

TEXT /1 -ELECTRICITY

Electrical engineering deals with the practical application of the theory of electricity to the construction and manufacture of systems, devices and assemblies that use electric power and signals.

Electrical engineering can be divided into four main branches:

- Electric power and machinery
- Communications and control
- Electronics
- Computers

Electrical applications are used in many industrial areas including:

electric power and machinery	superconductors	lasers
electronie circuits	solid-state electronies	radar
control systems	medical imaging systems	consumer electronic
computer design	Robotics	Fibre optics

In recent years, the electronic computer has emerged as the largest application of electrical engineering. However, another very large field is concerned with electric light and power and their applications. Specialities within the field include the design, manufacture, and use of turbines, generators, transmission lines, transformers, motors, lighting systems, and appliances.

Electrical problems can be avoided by always using the right *devices* and taking appropriate measures for *electrical protection.*

Electrical problems :

Ground fault- overcurrent- overload- short circuit

Electrical protection :

Dustproof- rainproof- raintight- watertight- weatherproof- explosionproof

Electrical devices :

Branch circuit- breaker- cable- circuit- feeder- fixture- fuse- ground- junction (electrical box)- panelboard- service panel- switch- switchboard

Task One : Express each of these ideas as a compound.

1 a board consisting of a number of panels

2 material that does nat allow water to get into it

3 material that doesn't allow rain to get into it

4 a board consisting of a number of electrical switches

S conductors which are perfect, conducting a current without a battery

6 material that will nat be damaged in an explosion

7current which is greater than the load for which the system or mechanism was intended

8 material that does nat allow dust to get into it

Task Two : What is being described ? Find a word or phrase from the text above.

1 It produces a narrow beam of light and can be used to read barcades in a supermarket, play compact discs, etc.

2 A word to describe any piece of equipment made for a specific purpose.

3 A pulse of light, current or sound that is used to convey information.

4 A device that uses electromagnetic waves to calculate the distance of an object.

5 Glass fibres that are used for data transmission.

6 The study of how robots are made and used.

7 A circuit where the current has a choice of paths.

8 A situation where the electrical current takes an easier path than the one intended.

9 A piece of equipment that stops an electrical current if it becomes dangerous.

10 A connection paint where several cables are connected

Task Three : Complete the text below with words from the page opposite.

In power stations, high pressure steam, gas, water or wind is used to drive…… which turn huge …… Large power stations generate electricity at 25,000 volts. This is then stepped up to 275,000 or 400,000 volts using …… before being fed into a network of …….. known as the Grid. Electrical …… is then carried across the country by overhead
…….…… …… . The Grid voltage is reduced by stepping down at substations before it is used in homes and factories. Some industrial plants take

electrical energy from the Grid system at 33,000 or 11,000 volts, but for use in homes and offices it is stepped down to a lower level.

In the home, supply from the mains …….passes through a main ……. and then to a fuse box. The fuse box is a distribution paint for the electricity supply to the house. Most houses have two or three ring main ……. ……. connecting electric sockets. There are also two or three circuits and separate circuits for.....a such as cookers and hot water heaters.

Key Answer

Task One :

1 panelboard- 2 watertight- 3 rainproof- 4 switchboard- 5 superconductors- 6- explosionproof- 7 overIoad- 8 dustproof

Task Two :

1laser	6 Robotics
2 device	7branch circuit
3 signal	8short circuit
4 radar	9 breaker
5 fibre optics	10 junction (electrical) box

Task Three

A turbines	g transformers
b generators	h cable
e transformers	i fuse
d cables	j circuits
e power	k lighting
f transmission lines	l appliances

TEXT /2 ELECTRONICS/ PART One

Electronics is a branch of engineering and physics. It deals with the emission, behaviour, and effects of electrons for the generation, transmission, reception, and storage of information. This information can be audio signals in a radio, images (video signals) on a television screen, or numbers and other data in a computer. Electronic systems are important in communication, entertainment, and control systems.

Electronic circuits consist of interconnections of electronic components, at the heart of which are semiconductors. Transistors, which are made of silicon or germanium, are made from semiconductors. Commercial products range from cellular radiotelephone systems and video cassette recorders to high-performance supercomputers and sophisticated weapons systems. In industry, electronic devices have led to dramatic improvements in productivity and quality. For example, computer-aided design to oIs facilitate the design of complex parts, such as aircraft wings, or intricate structures, such as integrated circuits.

The development of microelectronics has had a major impact on the electronics industry. Electroniccomponentsare expected to deliver ever higher performance, while electronic circuits continue to benefit from miniaturization.

Some useful vocabulary

Function of electronic circuits

Amplification- demodulation- electronic processing- generation- modulation- radio wave- information extraction

Electronic component

Absorb- active –battery- capacitor- energy- generator- inductor- resistor- transistor- vaccum tube

Impacts

High speed- storage capacity- storage system- ultrahigh image definition Device size

Exercise 1 : Choose the correct word in the following sentences.

1 Transistors/inductors are the key component in electronics.
2 They consist of three layers of silicon semiconductor/superconductor.
3 All electronic/electrical systems consist of input, a processor and output, and usually memory.
4 The input receives/resists and converts information while the output converts and supplies electronically processed information.
5 The memory may not be present in simple systems. but its function is the storage/transmission of information for the processor.
6 Continual developments in electronics give us increased reliability /recovery in electronic devices.
7 Electronic equipment controls microprocessors/microwaves in. for example. weapons systems. cellular radiotelephone systems and domestic appliances.
8 Electronic devices have improved our lives by providing high quality communication/combination and entertainment.

Exercise2 : Use the word in brackets to form a word which fits in the sentence.

1 The weak audio signal entering a radio is…**amplified** by the …**amplifier**…thus making it audible. (amplify)
2 Computer games are just one example of electronic systems being used for**…entertainment**.. (entertain)
3 Due to developments in mobile telecommunications systems. a new **generation**.. of mobile phone is now available. (generate)
4 IC stands for…**integrated circuits.....** circuit. (integrate)
5 Computer software is…**reliable .....** if it does what the manual says it should. (rely)
6 One area of electronics is concerned with the…**storage**…… of information. (store)
7 The**……transmission**..... of signals to satellites is made by microwaves. (transmit)
8 A computer chip is capable of holding vast amounts of…**stored .....** information. (store)
9……**transmission.**. of speech was first carried out through …**modulation** …of the amplitude of a radio signal. (transmit, modulate)
10 In a laser, energy is released in the form of …**emitted…**light. (emit)

Activity three complete with words from the list

Germanium- transistors- electrons- capacitors- devices- diodes- integrated circuits- resistors –silicon- semi conductor

Electronic circuits are built from basic components. (a)…**……..**… are the most important components. They can be used to amplify the strength of a signal by converting a weak signal into a stronger one Or to switch other circuits on or ofI (b)……**……...** reduce the flow of (c)…**……...** through the circuit, adding resistance to that circuit.
(d) ……**……..**….function as electronic valves allowing current to flow in only one direction. (e)…**……..**… store electricity in order to smooth the flow. They can be charged and discharged. The two most common capacitors are ceramic and electrolytic. Most electronic devices use (f)…**……...** (IC) or microchips. Inside an IC is a very small piece of(g) ……**……...**with circuits built in. Today, semiconductors are usually made of (h)……**……..** which is che aper and easier to manufacture than (i)…**……...** Researchers are constantly trying to reduce the size of transistors in.order to reduce the size of (j)……**……...**

TEXT/3 ELECTRONICS /PART TWO

The electronics industry creates, designs, produces, and sells devices such as radios, televisions, stereos, video games, and computers, and components such as semiconductors, transistors, and integrated circuits, In the second half of the 20th century, this industry had two major influences. Firstly it transformed our lives in factories, offices, and homes; secondly it emerged as a key economic sector. Specific advances include:

- ✓ The development of space technology and satellite communications
- ✓ The revolution in the computer industry that led to the personal computer
- ✓ The introduction of computer-guided robots in factories
- ✓ systems for storing and transmitting data electronically
- ✓ Radio systems to automobiles, ships, and other vehicles
- ✓ Navigation aids for aircraft, automatic pilots, altimeters, and radar for traffic control

The *applĺcatians al electronĺc engĺneerĺng* cover almost every aspect of modern life; the industry involves a wide range of *tasks.*

Applications of electronic engineering

Aerospace, automative, consumer goods, chemical, defense, energy/power, environmental, imaging equipment,industrial automation, medical instrumentation, oil and gas, pharmaceutical, pulp and paper, semiconductor, telecommunications

Tasks in electronic Engineering

Design, develop, evaluate, manufacture, repair, test, diagnose

Activity One put the words/ phrases in the right category

Develop solutions- transportation systems- Robot – automative industry- transmit data- diagnose problems- radio- pharmaceutical industry- evaluate results- television- provide support- chemical indutry- altimeter- defense- computer

Devices	Functions	Applications

Activity Two match between A and B then complete the statements

Space	computer
Computer-guided	goods
Satellite	robots
Consumer	technology
Navigation	communications
Personal	aids

1- ……. ……has enabled people to survive in space.
2- Communication systems for aircraft and ships are dependent on…**…….. ……..**
3- Many people today their own …**……** ..at home
4- Industrial processes have their been made more efficient through the use of ……**……** ……
5- Ships and aircraft require ……**……..** to find their way
6- **……**…….such as washing machines and dishwashers contain electronic circuits

EXERCISE 3/ Complete the paragraph with the following words

Architecture/ repair/ examined/ instrumentation/ medical

…….electronics Technicians

The biomedical engineering Department provides electronic and medical engineering as well as ITU support to different specialties within the hospital.

We are looking for ……...to join our team of engineers. You will be involved in the management . ……and maintenance of the hospital's highly sophisticated medical electronic……You will be required to work in maintaining complex systems and equipment.

There have been great changes in crime and its detection over the past ten years as a result of technological advances. Computers and mobile phones have become more common and as a result, criminal activity involving them has also risen.

Computers and SIM cards are……in our department to recover data that is required in criminal investigations.

You will have knowledge of electronic……of computers or mobile phones and possibly an understanfing of computer operating systems

TEXT/4 HEALTH AND SAFETY AT WORK

A- The average person finds it difficult to assess risks. For this reason, work practices need to be regulated. Examples of dangerous activities are:

- ✓ Welding or grinding without goggles
- ✓ Working on a construction site work without a hard hat
- ✓ Working in noisy factories, cabs, on airport tarmacs and with outdoor machinery without ear protection
- ✓ Working in chemical areas without protective clothing
- ✓ Smoking near hazardous substances

Without regulation some employees will take risks.

Health and safety is a part of employment (labour) law. It covers general matters such as:

- ✓ occupational health
- ✓ accident prevention regulations
- ✓ special regulations for hazardous occupations such as mining and building
- ✓ provisions for risks such as poisons, dangerous machinery, dust, noise, vibration, and radiation
- ✓ the full range of dangers arising from modern industrial processes, for example the widespread use of chemicals.

B- The key concerns for health and safety are to assess the *risks and hazards* by identifying and quantifying the *effects* so that appropriate *protective measures* can be taken.

Risks and hazards

Combustion- contamination- drains-dust- explosion- flammable- friction- fumes- fumigation- gas- harmful- shock- spraying- toxic- vapour

Effects

Adverse effects- birth defects- burn- cancer- dizziness- drowsiness- genetic damage- impair fertility- irreversible effect- vomiting

Protective measure

Avoid contact with- dispose of – dry- handle- keep- precautionary- protect- reycle- rinse- seal- tightly- wash- well-ventilated

Task One : Choose the correct word in each sentence.

1 Store containers in a well-ventilated/good-ventilated place

2 Wipe up any spillages immediately and wash/rinse with soapy water.

3 Process coolíng water can be returned/recycled.

4 This chemical is toxic/intoxicating if swallowed.

5 Leftover chemicals should be disproved/disposed of safely.

6 Please wear protective gloves when fingering/handling this material.

7 Remember that asbestos fibres can cause cancer/coma.

8 Pregnant women should not take this medicine as it may cause birth defects/effects.

9 Increased levels of radiation may lead to compared/impaired fertility.

10 Do not empty chemical paint products into the drains/grains.

11 Protect/ Avoid contact with skin and eyes.

12 Do not use with other products as it may release dangerous fumes/fumigation.

Task Two : Complete the following sentences with a form of the word in brackets.

1 When working in this area, please wear… ..... clothing (protect).

2 Don't pour used chemicals into the drains as they will cause… ..... (contaminate).

3 Heating this líquid may cause an….....(explode).

4 These chemicals must be kept in a locked cupboard because they are… ..... (harm)

5 While they repair the roof, we will close this department as a .....measure (precaution).

6..... health is one part of Health and Safety (occupation).

7 Working in a noisy factory without ear protectors is a….....activity (danger)

8 Petrol and oil are ..... chemicals (flame).

9 Make sure the containers are.....closed (tight).

10 Make sure you are wearing breathing equipment before starting ..... (fume).

Task Three : The manager in charge of health and safety is explaining things to some new employees. Complete what he says by filling the blanks with the correct word from the box.

Noise- protection- drowsiness- dust- accidents- smoke- poisonous- fumes- risks- burns- goggles

Manager : new government regulations mean that we are all required to be more aware of (a)… ..... in the workplace. As your employer, we will provide you with the necessary safety equipment. You must wear (b)…..... to protect you eyes when working on this machinery. You should aldo wear (c)….....because the (d)… ..... from the machines is high enough to cause damageto you hearing. And of course, there is a lot of (e)..... in the air, so pleasewear masksto stop you breathing it in. But, you too are responsible for your safety and for preventing (f)…..... happening.

Employee : are we looking at the fire risks ?

Manager : yes, of course. Remember that it is very dangerous to (g)..... near the chemical stores. In fact, we have a no smoking policy throughout the company. Chemicals themselves are, of course, (h)….....so they should never enter you mouth. They could cause (i)…..... if you get them on your skin. If you leave them without a lid, (j)… .....may escape and cause headaches, (k)… ..... or dizziness.

Key Answer :

Task One :

1Store containers in a **well-ventilated**/good-ventilated place
2 Wipe up any spillages immediately and **wash**/rinse with soapy water.
3 Process coolíng water can be returned/**recycled.**
4 This chemical is **toxic**/intoxicating if swallowed.
5 Leftover chemicals should be disproved/**disposed** of safely.
6 Please wear protective gloves when fingering/**handling** this material.
7 Remember that asbestos fibres can cause **cancer**/coma.
8 Pregnant women should not take this medicine as it may cause birth **defects/**effects.
9 Increased levels of radiation may lead to compared/**impaired** fertility.
10 Do not empty chemical paint products into the **drains**/grains.
11 Protect/ **Avoid** contact with skin and eyes.
12 Do not use with other products as it may release dangerous fumes/**fumigation**

Task Two :

1When working in this area, please wear……**protective .....**clothing (protect).
2 Don't pour used chemicals into the drains as they will cause…**contamination**..(Contaminate).
3 Heating this líquid may cause an……**explosion**…… (Explode).
4 These chemicals must be kept in a locked cupboard because they are…**harmful**..(harm)
5 While they repair the roof, we will close this department as a -…**precautionary**..measure (precaution).
6……**Occupational .....** health is one part of Health and Safety (occupation).
7 Working in a noisy factory without ear protectors is a……**dangerous**…activity (danger)
8 Petrol and oil are ……**flammable…** .... chemicals (flame).
9 Make sure the containers are …**tightly..**closed (tight).
10 Make sure you are wearing breathing equipment before starting …**fumigation….**(fume).

Task Three :

Manager : new government regulations mean that we are all required to be more aware of (a)…**risks .....** in the workplace. As your employer, we will provide you with the necessary safety equipment. You must wear (b)……**goggles.....**to protect you eyes when working on this machinery. You should aldo wear (c)…**protection**…….because the (d)……**noise**…….from the machines is high enough to cause damageto you hearing. And of course, there is a lot of (e) **dust**…….in the air, so pleasewear masksto stop you breathing it in. But, you too are responsible for your safety and for preventing (f)……**accidents.....**happening.

Employee : are we looking at the fire risks ?

Manager : yes, of course. Remember that it is very dangerous to (g) …**smoke…**…….near the chemical stores. In fact, we have a no smoking policy throughout the company. Chemicals themselves are, of course, (h)…**poisonous…**.…so they should never enter you mouth. They could cause (i)……**burns**…….if you get them on your skin. If you leave them without a lid, (j)…**fumes**……may escape and cause headaches, (k)……**drowsines**….or dizziness.

UNIT FOUR

Charts, Graphs and Diagrams

1. Describing the Speed of a Change :

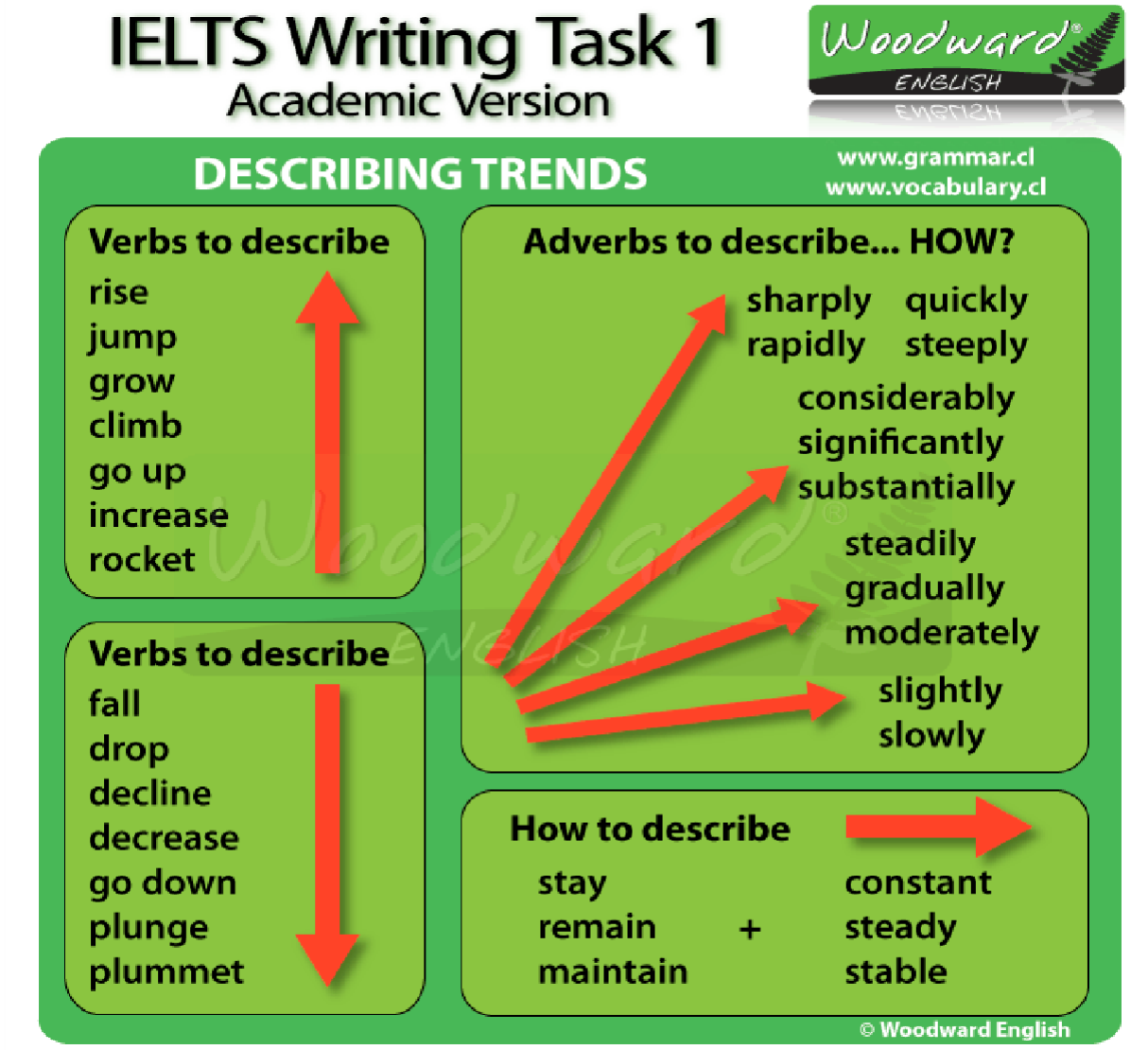
Adjectives	Adverbs
rapid	rapidly
quick	quickly
swift	swiftly
sudden	suddenly
steady	steadily
gradual	gradually
slow	slowly

2. Explaining diagrams :

- Sales rose slightly in the final quarter.
- Profits fell a little last year.
- Demand increased gently
- Turnover decreased steadily
- Turnover dropped suddenly
- Turnover decreased quickly.
- Demand increased rapidly.
- Profits fell dramatically.
- At the beginning of this year sales stagnated.
- In the middle of August profits slumped.
- At the end of last year demand peaked.
- In the first quarter of 2008 sales plummeted.
- In the second quarter of 2007 sales flattened out.
- In the third quarter of 2007 sales leveled off.
- In the last quarter of 2007 sales remained steady.

3. Expressing the Movement of a Line

Verbs	**Nouns**	**Adjectives**	**Adverbs**
rise (to)	a rise	dramatic	dramatically
increase (to)	an increase	sharp	sharply
go up to		huge	hugely
grow (to)	growth	steep	steeply
climb (to)	a climb	substantial	substantially
boom	a boom	considerable	considerably
peak (at)	(reach) a peak (at)	significant	significantly
fall (to)	a fall (of)	marked	markedly
decline (to)	a decline (of)	moderate	moderately
decrease (to)	a decrease (of)	slight	slightly
dip (to)	a dip (of)	small	
drop (to)	a drop (of)	minimal	minimally
go down (to)			
reduce (to)	a reduction (of)		
a slump			
level out	a leveling out		
no change	no change		
remain stable (at)			
remain steady (at)			
stay (at)			
stay constant (at)			
maintain the same level			



Task One : Place the words in the right column

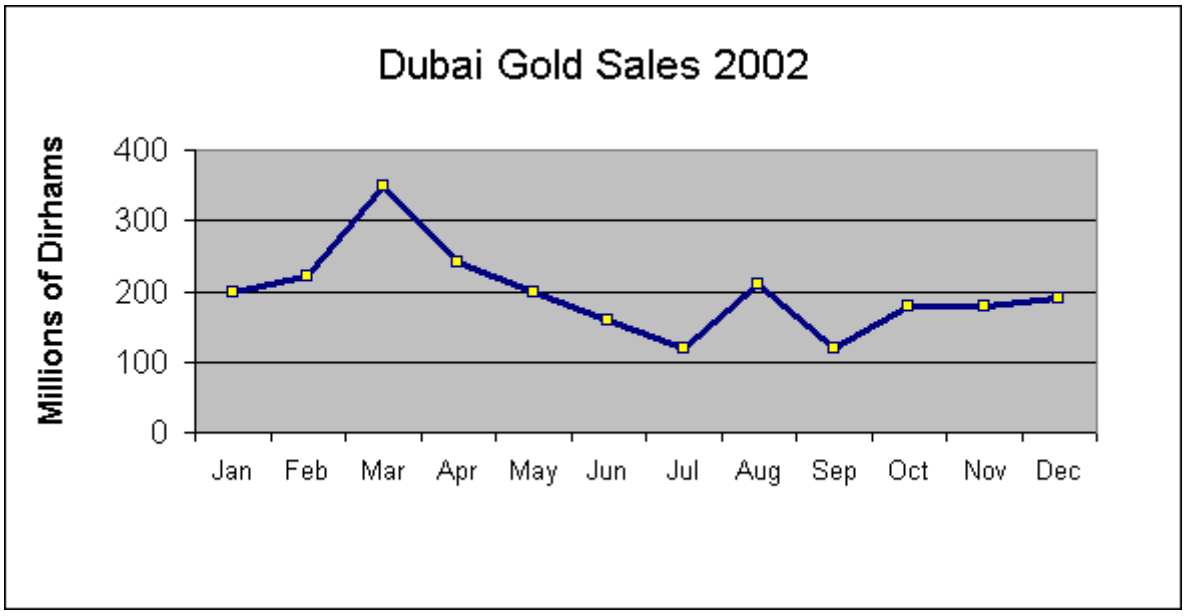
Be constant	climb	collapse	cut
Expansion	extension	fall	go down
Growth	improvement	level off	push down
Reduction	rise	shoot up	soar
Stability	stagnation	stand at	stay at

	↗	↘	→
Verbs	Expansion	Fall	Be constant
Verbs	Climb	Go down	
Verbs			
Verbs			
Verbs			

Task Two :complete the table

↗	↘	→	↗	↘	→
increase	Decrease	Maintain	Increase	Decrease	Stay at
Raise	Drop	Keep	Rise	Drop	Reach a peak
Step up	Cut		Grow	Decline	Remain stable
Expand	Go down		Expand	Fall	
Improve			Improve		

Task Three : fill in the correct word

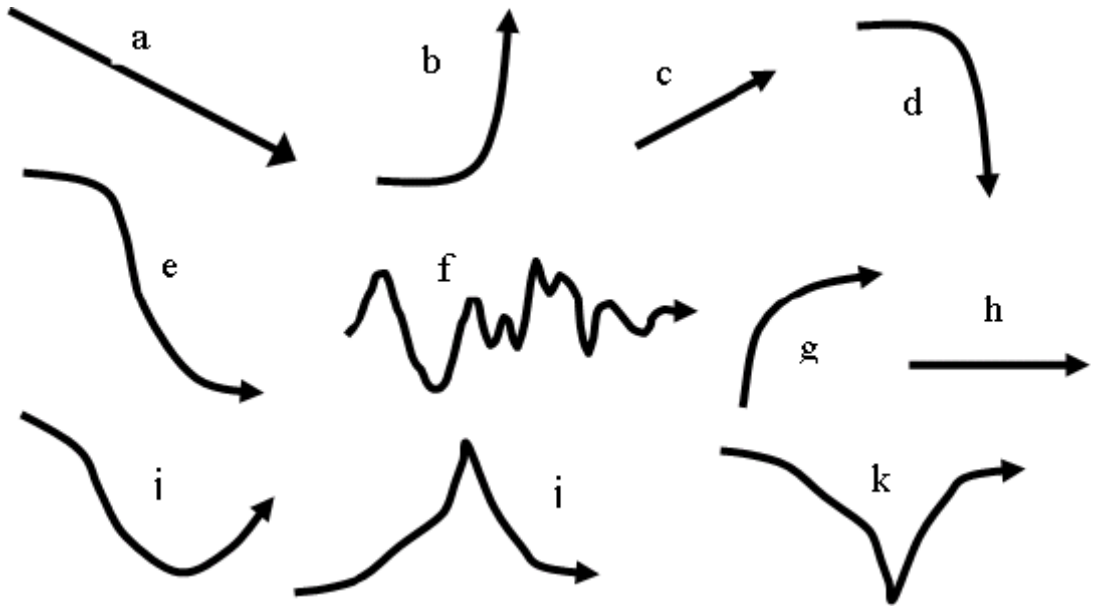


a low point - declined - doubled – drop- from- increased slightly –
Recovered remained- rising sharply – sudden- to - were

In January, gold sales _____ about 200 million dirhams per month. In February they _____ to Dhs 220 million, _____ to a peak of 350 million dirhams in March. Over the next four months, sales _____ steadily, reaching _____of 120 million dirhams in July.

In August, there was a _____increase. Sales almost _____, rising _____ Dhs 120 million in July to Dhs 210 million in August. This was followed by a [?] in September to Dhs 120 million.
From September to October, sales _____ from Dhs 120 million to Dhs 180 million. In October and November, sales _____steady, and there was a small increase in December _____190 million dirhams.

Task Four : match between trends and expressions



1. The market is showing some signs of growth. _____
2. The market is extremely volatile. _____
3. The pound slipped back against the dollar. _____
4. The Swiss franc is staging a recovery. _____
5. The yen lost ground slightly. _____
6. There's been a dramatic downturn in the market. _____
7. There's been an upsurge of interest in gold. _____
8. The share price bottomed out at 11 cents. _____
9. Gold peaked at €300 an ounce. _____
10. Profits will level off at around €10,000. _____
11. Sales hit an all-time low. _____
12. There hasn't been much movement in the price of tin _____

Answer key

Task one Place the words in the right column

Be constant	climb	collapse	cut
Expansion	extension	fall	go down
Growth	improvement	level off	push down
Reduction	rise	shoot up	soar
Stability	stagnation	stand at	stay at

	↗	↘	→
Verbs	Expansion	Fall	Be constant
Verbs	Climb	Go down	stagnation
Verbs	Growth	reduction	Stay at
Verbs	Improvement	Push down	Stand at
Verbs	Rise	collapse	stability

Task three : complete the paragraph

In January, gold sales ___were_____ about 200 million dirhams per month. In February they _incresed slightly_____ to Dhs 220 million, __rising sharply_____ to a peak of 350 million dirhams in March. Over the next four months, sales _drop_____ steadily, reaching ___a low point_____ of 120 million dirhams in July.

In August, there was a ___sudden_____ increase. Sales almost ___doubled_____, rising __from_____ Dhs 120 million in July to Dhs 210 million in August. This was followed by a decline…….in September to Dhs 120 million.

From September to October, sales _recovered_____from Dhs 120 million to Dhs 180 million. In October and November, sales __remained_____steady, and there was a small increase in December _to_____190 million dirhams.

2- HOW TO WRITE A FORMAL E-MAIL

With the explosion of information technology, we use more and more e-mails. E-mail is extremely convenient, with the click of a mouse, an e-mail can be sent to a colleague in the next office or a business partner at the other side of the world. Although you are probably more used to sending quite private e-mails to your friends, you will also have to learn to write formal e-mails to your existing or potential business partners – you need to remember that you have to be polite and follow almost the same rules as for formal letters.

Look at this example of a formal e-mail:

From: milena.strovs@guest.arnes.si

To: Gab. de Relações Internacionais [mailto:gri2@iscap.ipp.pt]

Subject: International week in Porto

Dear Ms Carneiro,

Thank you very much for your formal invitation.

I have completed the registry form and I am returning it to you.

If there's anything else, please do not hesitate to contact me.

Yours sincerely,

Milena Strovs-Gagic

Here is another example of e-mail

Sample Email Job Application Letter

To ……..

Object: assistant director position (Name)

Dear Manager,

It was with much interest that I read your job position on April 8th for an Assistant Communications Director. Your description of the work responsibilities of Assistant Director closely matches my experience, and so I am excited to submit my resume to you for your consideration.

In my position as an Assistant Communications Director for ABC Company, I wrote articles for the company website, managed the editing and posting of contributing articles, managed their social media presence.

My resume is attached. If I can provide you with any further information on my background and qualifications, please let me know.

I look forward to hearing from you.

Thank you for your consideration.

JohnDoe
Address
Email
HomePhone
Cell Phone

Activity One complet e this e-mail about Job Offer Thank You Email

To: GeoffreyDonald@gmail.com

Subject: Thanking you for the job offer of Assistant Supervisor.

….....Mr. Donald,

With all ……, I would like to …….. and your company for the …… letter that I have just received for the job position of the assistant supervisor in your prestigious and reputed company. It is a matter of great pride for me to become a …….. and I promise you that in no way will you be …… or ……with my …….

I wish to take this opportunity to assure you that I shall be dedicated towards my ……. and ..... and will try my best to meet deadlines and utilise my ……and ……. for the betterment of the company. The job offer letter comes as a surprise to me as I am sure that there were many other deserving candidates present for the interview.

Thanking you once again

Key Answer : Job Offer Thank You Email

To: GeoffreyDonald@gmail.com

Subject: Thanking you for the job offer of Assistant Supervisor.

Respected Mr. Donald,

With all due respect, I would like to thank you and your company for the job offer letter that I have just received for the job position of the assistant supervisor in your prestigious and reputed company. It is a matter of great pride for me to become a part of your dynamic team and I promise you that in no way will you be disappointed or unsatisfied with my services.

I wish to take this opportunity to assure you that I shall be dedicated towards my duties and responsibilities and will try my best to meet deadlines and utilise my skills and qualifications for the betterment of the company. The job offer letter comes as a surprise to me as I am sure that there were many other deserving candidates present for the interview.

Thanking you once again

Mr……

3- HOW TO WRITE A CV

A curriculum vitae, commonly referred to as CV, is a longer (two or more pages), more detailed synopsis than a resume. Your CV should be clear, concise, complete, and up-to-date with current employment and educational information.

-Personal details and contact information. Most CVs start with contact information and personal data but take care to avoid superfluous details, such as religious affiliation, children's names and so on.

-Education and qualifications. Take care to include the names of institutions and dates attended in reverse order; Ph.D., Masters, Undergraduate.

-Work experience/employment history. The most widely accepted style of employment record is the chronological curriculum vitae. Your career history is presented in reverse date order starting with most recent. Achievements and responsibilities are listed for each role. More emphasis/information should be put on more recent jobs.

-Skills. Include computer skills, foreign language skills, and any other recent training that is relevant to the role applied for.

Task1/Listening : listen to the audio about writing a CV then complete the transcript

Transcript: Writing a CV

Interviewer: Learn English Professionals is talking to John Woodrow, who works in the Human Resources department of a large UK-based company. John, tell us about your work...

John: I work on recruitment, especially – so I'm the person who reads the hundreds of CVs we get sent each year!

Interviewer: Do you accept CVs as part of your recruitment process?

John: When we advertise for a particular post, we send out our own application form, which is tailored to our company, and we can use it to make sure we find exactly what we're looking for...

Interviewer: So a CV is useless?

John: No! Not at all – we're happy to accept CVs from people even when we're not recruiting.

That way we can build up a database of possible candidates, and as our company is always changing – we're very flexible in our needs right now (laughs) – it's good to know what kind

of people are out there. We do keep everything on file, and will get back to people who look promising.

Interviewer: So we should be sending you our CVs?

John: Yes, absolutely, yes!

Interviewer: What .....can you give us on writing a CV?

John: Keep it ……., keep it ……., keep it ..... Anything longer than three pages will automatically go into the bin. Just tell us what we.....Make sure it's …… – and that there are no …… on it! And no fancy fonts ..or photographs. We don't need to know what people look like, just what they've done, and what they're …… of...

Interviewer: So we're going to look at a couple of CVs now...

John: Yes – these are a couple that arrived just this morning, so let's take a look. (sound of paper unfolding)...ok, I can see straight away that we have a good one and a bad one here...

Interviewer: (laughs) How can you tell so soon?

John: Well, as I just said, this one here is...how many .. one, two, three, four pages long, it's written in tiny type, I can hardly read it.. and, wait, yes, there's a photograph attached to the front!

Interviewer: Too much information?

John: Yes...just leafing through it, I can see he's written about where he went to primary school – that's just ……...

Interviewer: What kind of educational background should be included?

John: Perhaps your high school, but it's mostly further education we're interested in, …… or ……, then any professional.....you may have, as well as …….. of course...

Interviewer: That's important?

John: Oh yes – placements or internships all count!

Interviewer: What about personal information?

John: A bit is necessary...but look, this guy has written he was a member of the stamp collecting society in secondary school...! Not interested...

Interviewer: What about the other CV?

John: Ok, again, I can see right away this looks more promising. only two and a half pages,

lots of space on the page, …… to read, ……. Hmmm, a couple of impressive looking references, that's good. And, yes, they've included language skills – very important...

Interviewer: What .....are you looking for?

John: Well, ..., obviously – as we're a UK-based company and English is still the language of global business, and then, well, anything really –..... is useful, Russian, Mandarin …….. too...

Interviewer: Ok, we'll get studying! Thanks John! (**learnenglishbritish council.org)**

Task Two : Comprehension task

True or false/ Decide if the following statements are true or false.

1. Part of John Woodrow's job is deciding which new people his company will employ.
2. Woodrow reads hundreds of CVs every month.
3. His company does not accept CVs.
4. Woodrow's company keeps lists of potential employees on a computer.
5. Woodrow will ignore a CV which is too long.
6. He thinks the first CV he looks at is too short.
7. One problem with the first CV is that it includes irrelevant information.
8. Woodrow suggests that placements are not important when describing your experience.
9. The second CV has too much space on it.
10. The second CV includes information about the languages the person can speak.
11. Woodrow is only interested in people who can speak Spanish.

Task Three : Listen to the audio again and complete the text by writing the missing words into the gaps below.

1. John, _____about your work.
2. It's good to know what _____people are out there.
3. What advice _____give us on writing a CV?
4. Anything longer _____pages will automatically go into the bin.
5. Make sure it's clearly written and _____no spelling mistakes in it.
6. We don't need _____what people look like.
7. We're _____a couple of CVs now.

Task Four : Match the words and phrases in the table to their definitions.

recruitment	CV	database	Relevant	
candidate	Post	Reference	Flexible	

Definitions

a. A person who is competing to get a job

b. A document that describes your qualifications and working history to support a job application

c. Able to change or be changed easily according to the situation

d. The process of finding people to work for a company or become a new member of an organization

e. A computer system that stores lots or information

f. Connected with what is happening or being discussed

g. A person who knows you can say why you are suitable for a job

h. A job in a company or organization

key answer

Task one : complete the dialogue

Transcript: Writing a CV

Interviewer: Learn English Professionals is talking to John Woodrow, who works in the Human Resources department of a large UK-based company. John, tell us about your work...

John: I work on recruitment, especially – so I'm the person who reads the hundreds of CVs we get sent each year!

Interviewer: Do you accept CVs as part of your recruitment process?

John: When we advertise for a particular post, we send out our own application form, which is tailored to our company, and we can use it to make sure we find exactly what we're looking for...

Interviewer: So a CV is useless?

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That way we can build up a database of possible candidates, and as our company is always changing – we're very flexible in our needs right now (laughs) – it's good to know what kind

of people are out there. We do keep everything on file, and will get back to people who look promising.

Interviewer: So we should be sending you our CVs?

John: Yes, absolutely, yes!

Interviewer: What advice can you give us on writing a CV?

John: Keep it short, keep it simple, keep it relevant. Anything longer than three pages will automatically go into the bin. Just tell us what we need to know. Make sure it's clearly written – and that there are no spelling mistakes on it! And no fancy fonts...or photographs. We don't need to know what people look like, just what they've done, and what they're capable of...

Interviewer: So we're going to look at a couple of CVs now...

John: Yes – these are a couple that arrived just this morning, so let's take a look...(sound of paper unfolding)...ok, I can see straight away that we have a good one and a bad one here...

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Interviewer: Too much information?

John: Yes...just leafing through it, I can see he's written about where he went to primary school – that's just not relevant...

Interviewer: What kind of educational background should be included?

John: Perhaps your high school, but it's mostly further education we're interested in, university or college, then any professional qualifications you may have, as well as work experience of course...

Interviewer: That's important?

John: Oh yes – placements or internships all count!

Interviewer: What about personal information?

John: A bit is necessary...but look, this guy has written he was a member of the stamp collecting society in secondary school...! Not interested...

Interviewer: What about the other CV?

John: Ok, again, I can see right away this looks more promising...only two and a half pages, lots of space on the page, easy to read, well-organised. Hmmm, a couple of impressive looking references, that's good. And, yes, they've included language skills – very important...

Interviewer: What languages are you looking for?

John: Well, English, obviously – as we're a UK-based company and English is still the language of global business, and then, well, anything really – Spanish is useful, Russian, Mandarin Chinese too...

Interviewer: Ok, we'll get studying! Thanks John!

Task two : true- false-false- true-true- false- true- false- false- true- false

Task Three : tell us- kind of- can you- than three- that there are –to know- going to look at

Task four : Definitions

a. A person who is competing to get a job= candidate

b. A document that describes your qualifications and working history to support a job application=CV

c. Able to change or be changed easily according to the situation=flexible

d. The process of finding people to work for a company or become a new member of an organization=recruitment

e. A computer system that stores lots or information=database

f. Connected with what is happening or being discussed=relevant

g. A person who knows you can say why you are suitable for a job=reference

h. A job in a company or organization=post

Here are some Examples of CV

ALISON CONNELLY
15 SCOUSER DRIVE, LIVERPOOL, MERSYSIDE, LV3 5GT
01606 222244

PERSONAL PROFILE

I am a second year Business Management student at the University of Birmingham. I have developed excellent analytical and leadership skills through my degree, as well as key customer service and communication skills through my part time job at The French Shop. My determination and dedication is highlighted by my achievement of a black belt karate. I am now looking to further develop and use my skills in a year in industry placement, specifically in marketing.

EDUCATION

BSC BUSINESS MANAGEMENT | FIRST YEAR AVERAGE: 68%

SEPTEMBER 2016 - PRESENT

- 1st Year: Principles of Marketing (72%), HR (65%), Analytical Techniques (68%),
- 2nd Year: International Marketing, Consumer Behaviour, Organisational Management.

NUNS MONK SCHOOL, WELWYN, HERTFORDSHIRE AL9 6NN

2012 - 2016

- A level Business Studies, Economics, General studies, Photography (AAAA)
- GCSE Maths, English, Science (AAB), 8 additional GCSEs grade C or above

WORK EXPERIENCE

THE FRENCH SHOP |SALES ASSISTANT/CASHIER

SEPT 2016 - PRESENT

- Serving customers and dealing with their requests.
- Cash handling on the checkout and in the cashing up of tills.
- Dealing with customer queries, customer complaints, and refunds on the Customer Service Desk.

PIES R'US. |BAKERY PRODUCTION/SALES ASSISTANT

SEPT 2000 - 2016

- Stock replenishment and packing pies.
- Conducting quality tests.
- Have to work efficiently and within a team to avoid a back log of stock.
- Serving customers and dealing with their enquiries, orders and requests.

ADDITIONAL SKILLS AND INTERESTS

- Linguistics- can speak confidently in French and Spanish.
- Special Needs Assistant - I have had training during my secondary education, working with children aged between 10-13 years old with learning difficulties.
- Trained for 7 years in karate, qualified as a black belt.
- Sign Language - basic level of sign language.

Students Presentations

During the whole year, students were asked to prepare an oral presentation in the field of Electrical Engineering. Here are some interesing titltes ;

- ✓ Energy storage
- ✓ Wind turbine
- ✓ Electricity
- ✓ Health and safety at work
- ✓ Renewable energy
- ✓ Nuclear waste
- ✓ Hybrid vehicles
- ✓ Smarts machines
- ✓ Artificial intelligence

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