**Mrs ABDELLAOUI Amaria 2023/2024**

**Technical English**

**TD n°: 03**

The electronics industry creates, designs, produces, and sells devices such as radios, televisions, stereos, video games, 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 applications al electronic engineering cover almost every aspect of modern life; the industry involves a wide range of tasks.

Applications of electronic engineering

Aerospace - automative - consumer goods - chemical - defence - energy / power - environmental - imaging equipment- industrial autmation - medical instrumentation - oil and gas - pharmaceutical - pulp and paper - semiconductor - telecommunications - transportation

Tasks in electronic engineering

Design - develop - diagnose - evaluate - manufacture -repair - test

Electronic engineers are highly sought after, well rewarded and can be found in practically every branch of industry and commerce. Here is an extract from a job description for an electronic engineer:

**Senior Electronics Design Engineer**

The Senior Electronics Design Engineer will be responsible for enhancing and supporting the entire electronic design process, including,but not limited to:

* Electronic product development from design to production release
* Electronic design, analysis and testing of new products from product specification,

producing electronic prototypes and preparation of all necessary design documentation

* Firmware design for electronic devices . electronic circuit design and board layout for very small devices and instruments.
* Electronic circuit design and board layout for very small devices and instruments
* Accurate project and design Documentation
* Interfacing closely with marketing to create and develop products according to customer needs.
* Interacting with contract engineers that support product development .
* Developing and maintaining vendor selection and involvement tou ensure the highest quality products.

Obtaining necessary product approvals and comm .

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* Developing and maintaining vendor selection and involvement tou ensure the highest quality products.
* Obtaining necessary product approvals and communicating progress throughout the design process.
* Producing design schedules.
* Staffing and operating an electronics lab.

Put these words and phrases into one of the three categories below

Develop solutions - transportation systems - robot - automative industry - transmit data -

Diagnose problems - radio - pharmaceutical industry - evaluate results - television - provide support - chemical industry - altimeter - defence - computer.

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| **Devices** | **functions** | **Applications** |
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| --- | --- | --- |
| **Devices** | **functions** | **Applications** |
| robot | develop | transportation systems |
| radio | solutions | automotive industry |
| television | transmit data | pharmaceutical industry |
| altimeter | diagnose problems | chemical industry |
| computer | evaluate results | defence |
|  | provide support |  |

Choose one words from A with word from B ti complete the sentences below:

|  |  |
| --- | --- |
| A | B |
| Space | Comptuter |
| Computer-guided | Goods |
| Satellite | Tobots |
| Consumer | Technology |
| Navigation | Communication |
| Personal | Aids |

1. ................................has enabled people to survive in space.
2. Communications systems for aircraft and ships are dependent on.....................................
3. Many people today have their own..................................at home.
4. Industrial processes have 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.
7. **Space technology** has enabled people to survive in space.
8. Communications systems for aircraft and ships are dependent on **satellite communication**.
9. Many people today have their own **personal computer** at home.
10. Industrial processes have been made more efficient through the use of **computer- guided robots**
11. Ships and aircraft require **navigations aids** to find their way.
12. **Consumer goods** such as washing machines and dishwashers contain electronic circuits.

Here are two extracts from advertisements for jobs in electronics. Complete them with words from the box:

**Architecture - repair - examined- technicians - instrumentation - medical**.

1. ............................Electronics Technician

The Biomedical Engineering Department provides electronic and mechanical engineering as well as ITU support to different specialities within the hospital. We are looking for (b)........................................ to join our team of engineers. You will involved in the management.(c).............................and maintenance of the hospital’s highly sophisticated medical electronic (d)........................ . You will be requires to work unsupervised in maintaining complex systems and equipment. There have been great changes in crime and in its detection over tne past ten years as a result of technological advances. Computers and SIM cards are (e)........................................in our department to recover data that is required in criminal investigations. You will have knowledge of electronic (f).................................of computers.PDAs or mobile phones and possibly an understanding of computer operating systems.