**Mrs ABDELLAOUI Amaria 2023/2024**

**Technical English**

**TD n°: 01**

**Introduction**

Electronics is a branch of engineering and physics. It deals with the emission, behaviour, and effects of electrons forthe 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 tools 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. Electronic componentsare expected to deliver ever higher performance, while electronic circuits continue to benefit from miniaturization.

**Function of electronic circuits**

Amplification - demodulation - elecronic processing - genetration - information extraction - modulation - radio wave - recovery (of audio signal)

**Electronic components**

Absorb - active - battery - capacitor - diode - energy - generator - inductor - passive - resistor - transducer - transistor - vacuum tube (AmE) - valve (BrE)

**Impacts**

Device size - digitization - fidelity - high speed - increased reliability - manufacturing cost - storage capacity - storage system - ultrahigh image definition

1. **One way of increasing yourvocabulary is to learn the associated words from a key word.**

**Look at the word table below,which shows words related to the key words presented above:**

|  |  |  |
| --- | --- | --- |
| **Noun** | **Verb** | **Adjective** |
|   | activate | active |
| amplification | amplify |  |
| emission |  | emitted |
| entertainment |  |  |
|  | extract | extracted |
|  | generate | generative |
| integration |  | Integrated / integrative |
|  |  | receptive |
| recovery | recover | recovered |
|  |  rely |  |
| storage | store | stored |
|  |  | Transmittable/transmissible |

|  |  |  |
| --- | --- | --- |
| **Noun** | **Verb** | **Adjective** |
| activation  | activate | active |
| amplification | amplify | amplified |
| emission | emit | emitted |
| entertainment | entertain | entertaining |
| extraction | extract | extracted |
| generation | generate | generative |
| integration |  integrate | Integrated / integrative |
| reception |  receive | receptive |
| recovery | recover | recovered |
| reliability |  rely | reliable |
| storage | store | stored |
| transmission |  transmit | Transmittable/transmissible |

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

1- The weak audio signal entering a radio is.......................... by the......................... thus making it audible. (amplify)

2- Computer games are just one example of electronic systems being used for...............................

(entertain)

3- Due to developments in mobile telecommunications systems. a new..................................... of mobile phone is now available. (generate)

4- IC stands for...................................... circuit. (integrate)

5- Computer software is........................ if it does what the manual says it should. (rely)

6- One area of electronics is concerned with the......................... of information. (store)

7- The.................................... of signals to satellites is made by microwaves. (transmit)

8- A computer chip is capable of holding vast amounts of.................... information. (store)

9-................................ of speech was first carried out through.............................. of the

amplitude of a radio signal. (transmit, modulate)

1. In a laser, energy is released in the form of............................... light. (emit)

1- The weak audio signal entering a radio is **amplified** by the **amplifier** thus making it audible.

2- Computer games are just one example of electronic systems being used for **entertainment**

3- Due to developments in mobile telecommunications systems. a new **generation** of mobile phone is now available.

4- IC stands for **integrated** circuit.

5- Computer software is **reliable** if it does what the manual says it should.

6- One area of electronics is concerned with the **storage** of information.

7- The **transmission** of signals to satellites is made by microwaves.

8- A computer chip is capable of holding vast amounts of **stored** information.

9- **Transmission** of speech was first carried out through **modulation** of the

amplitude of a radio signal.

10-In a laser, energy is released in the form of emitted light.