

ELECTRONIC CIRCUITS

There are two major types of circuits used in electronics: discrete and integrated. Both circuits consist of *elements*, but there are some differences: the elements in the integrated circuit (ICs) cannot be separated from their overall assembly, but in the discrete circuits they can operate separately from that circuit. These elements are called components, parts or devices and can be divided into *active* or *passive*. Power sources, transistors and diodes are common active devices. The basic passive parts or components are: resistors, capacitors and inductors. Resistors are made of various materials, according to their composition, the three main types are: Carbon, wire-wound and film resistor.

Apart from resistors, capacitors are the most widely used passive elements in the circuit. The main feature which determines the type of capacitor is the dielectric material used. Both resistors and capacitors, can have either a *fixed* or a *variable* value.

Inductors are mainly coils. A coil consists of a number of turns of wire usually wound on a former. A transformer is a particular combination of two coils. Other kinds of coils are solenoids and chokes.

1. Translate these words:

CIRCUIT:

RESISTOR:

DISCRETE AND INTEGRATED:

CAPACITOR:

OVERALL ASSEMBLY:

INDUCTOR:

DEVICE:

DIELECTRIC MATERIAL:

POWER SOURCE:

COIL:

TRANSISTOR:

TRANSFORMER:

DIODE:

2. Write T (true) or F (false)

1 In electronics there are three major types of circuits. T F

2 The components can be divided into Active or Passive. T F

3 Resistors, capacitors and inductors are passive parts. T F

4 Resistors are made of a unique material. T F

5 Resistors and capacitors are the passive elements more used in the circuit. T F

6 Resistors can't have a fixed value. T F

7 Coils are inductors in its majority. T F

8 Two coils combined make a transformer. T F

3. Complete this table with the missing words.

4. Join the synonyms.

A -major



B- various



C- widely



D- main



E- feature



F-kind



1- different



2- characteristic



3- class



4- important



5 -extensively



6- principal.

