

## Microprocessor Assignment no.1

Q. no.1. Enlist Evolution of Microprocessor with their Specifications

Year	Name	Transistors	Data Width	Clock Speed
1974	8080	6000	8 bits	2 MHz
1976	8085	65,000	8 bits	5 MHz
1978	8086	29,000	16 bits	5 MHz
1982	80286	134,000	16 bits	6 MHz
1985	80386	275,000	32 bits	16 MHz
1989	80486	1,200,000	32 bits	25 MHz
1993	Pentium	3,100,000	32/64 bits	60 MHz
1997	Pentium II	7,500,000	64 bits	233 MHz
1999	Pentium III	9,500,000	64 bits	450 MHz
2000	Pentium IV	42,000,000	64 bits	1.5 GHz
2003	Pentium M	140,000,000	64 bits	2.13 GHz
2005	Pentium D	376,000,000	64 bits	3.73 GHz
2006	Core 2 Duo	291,000,000	64 bits	1.2 GHz - 3 GHz
2007	Core 2 Quad	410,000,000	64 bits	2.4 GHz
2009	Intel core i5 - 750	774,000,000	64 bits	2.6 GHz
2010	Intel core i5 - 430M	382,000,000	64 bits	2.6 GHz
2010	Intel core i3 - 530	382,000,000	64 bits	2.93 GHz



Year	Name	Transistors	Data width	Clock Speed
2010	Intel Core i3 - 330M	382,000,000	64 bits	2.13 GHz
2017	Intel Core i9 - 7940X	-	64 bits	4.30 GHz
2017	Intel Core i9 - 8950HX	-	64 bits	4.80 GHz
2019	Intel Core i5 - 10210u	-	64 bits	4.2 GHz
2019	Intel Core i3 - 1005G1	-	64 bits	3.6 GHz
2019	Intel Core i3 - 9100F	-	64 bits	4.2 GHz
2019	Intel Core i5 - 9300H	189,000,000	64 bits	3.80 GHz
2020	Intel Core i7 - 10700	-	64 bits	4.80 GHz



Q. no. 2 Define Transistors, Enlist type of Transistors with its application

⇒ Transistors - A transistor is a semiconductor device used to amplify or switch electronic signals & electrical power. It is composed of semiconductor material usually with at least three terminals for connection to an external circuit.

It is primary building block of all microchips, including our CPU. It is what creates the binary 0's & 1's (bits) your computer uses to communicate & deal with Boolean logic.

2 main types of transistors:

1. BJT (Bipolar junction transistor)

a) PNP - PNP transistors are used as switches

b) NPN - A common application for NPN transistors is to use them as switches in circuits in high power devices like motors.

2. FET (Field Effect transistor)

a) JFET - JFET is used as buffer amplifier

b) MOSFET - MOSFET amplifiers are used in radio frequency application.