SIGNAL

Anything that carries information can be called a signal. It constitutes an important part in our daily life.

Defn:— A signal is defined as a single-valued function of one or more independent variables, which contain some information.

'OR'

Any physical quantity that varies with time, space or any other independent variable is called 'signal'.

'OR'

Signal is a function of time.

Examples:—

Human Speech, Electric voltage, current, etc.

- If a signal depends on one independent variable, it is called a one-dimensional s/g. & if it depends on 2 independent variables, it is called 2-D s/g.

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In our course, we will concentrate mainly on 1-D s/g.

- If you are having a s/g 'f', then we denote it as, $f(t)$

  f → name of the s/g

  (t) → variation of 'f' with time, t.

NB: Noise is also a s/g but it carries unwanted information.

SYSTEM :-

A system is any physical set of components or a function of several devices that takes a signal in input & produces a signal as output.

Suppose you are having a signal & you want to square the s/g, or multiply the s/g or drag the s/g or compress the s/g — any operation you want to do to the s/g, that can be possible by this system.

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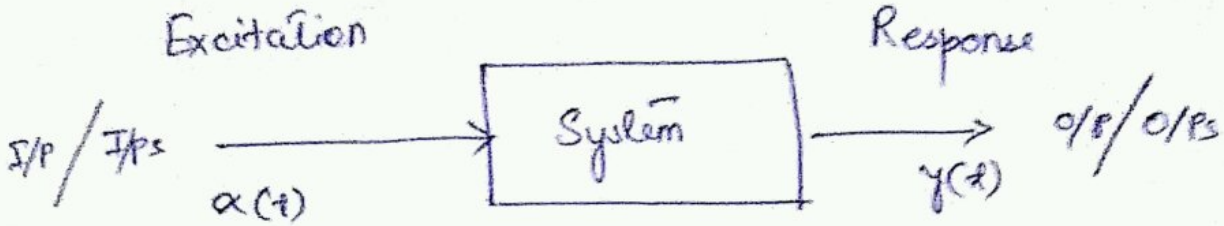

Ex :- Communication system.

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