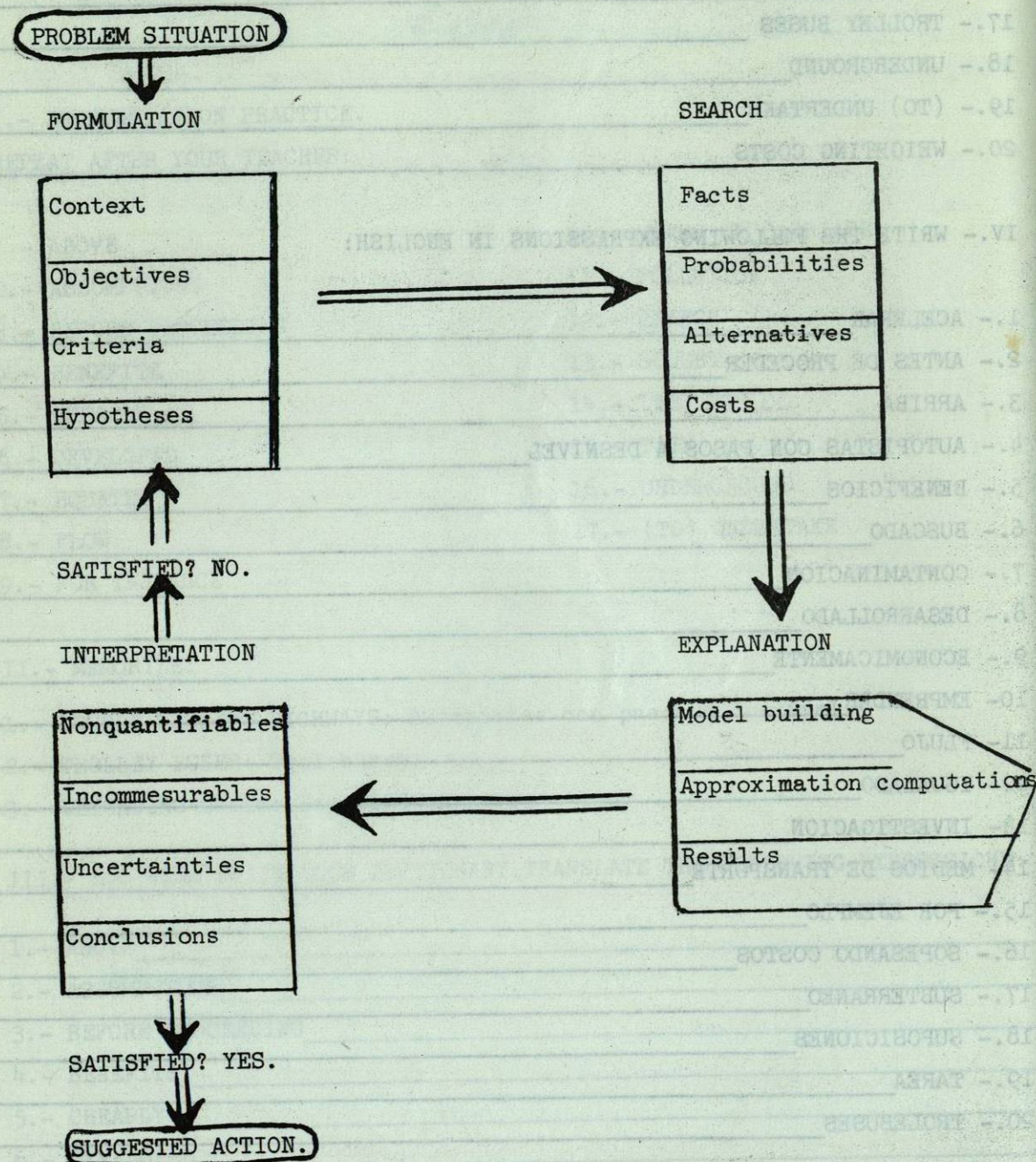


"THE PROCESS OF SYSTEM ANALYSIS"

FIGURE 1-F



The process of systems analysis can be diagrammed as shown in figure 1-F³⁴

problem may be given by a decision maker to the system analyst or the system analyst may be required to formulate the problem.

The process of problem formulation includes the detailed description of the task. For instance, if one is to undertake a systems analysis of the

transportation problem of a large city the analyst must know what the

objectives are. Are they to speed the flow of traffic, reduce the cost of

transportation per passenger on public means of carriage, determine policy of

the city with respect to subsidizing public transportation or determine

whether underground highways are feasible and desirable. Problem formulation

also includes the identification of important variables and a description of

the way they interrelate. For example in the area noted above, major variables

would be related to types of transportation: automobiles, subways, buses, trains,

trolley cars, and airplanes. Before proceeding with the study it is necessary

to select criteria for deciding which public means of transportation should

be developed, criteria for choosing among alternatives might be cost in terms

of air pollution. Correspondingly, benefits must be defined, against which costs

can be equated. In this process, hypotheses may be advanced for testing such

as subways are preferred over buses because they pollute the air less or buses

may be built cheaply that will not pollute the air, or double decking highways

is feasible and costs less than new highways.

The search stage needs little elaboration. Here are sought ideas and evidence to support them, including invention of new alternatives. Just as with corporate planning, the whole process should be quite clear: moving through

steps in a sequence such as the following: formulation of the problem, selecting

objectives, designing alternatives, collecting data, building models, weighting

costs against effectiveness, questioning assumptions, reexamining objectives,

looking at new alternatives, reformulating the problem, selecting different

or modified objectives and so on.

VI.- ANSWER IN ENGLISH:

1.- What does the reading talk about?

2.- How many steps should be followed in the process of system?
Mention them.

a) _____ b) _____ c) _____

3.- What kind of problem was used in this reading as an example?

4.- The detailed description of a task in a process of analysis is given in the stage called.....

5.- Which is the stage that needs a little elaboration?

VII.- UNDERLINE THE CORRECT ANSWER:

1.- The problem used as an example is related to:

- a) Transportation of a large city.
- b) Traffic in small cities.
- c) Police department in small cities.

2.- Before proceeding with the study it is important to select criteria for:

- a) Selecting the bus drivers.
- b) Selecting the color of taxi cabs.
- c) Which means of transportation should be developed.

3.- Benefits must be defined against which costs can be:

- a) Equated.
- b) Important.
- c) Necessary.

4.- Subways are preferred over buses because:

- a) They look beautiful.
- b) They pollute the air less.
- c) They are modern.

5.- The whole process starts with the first step called:

- a) Looking at new alternatives.
- b) Building models.
- c) Formulation of the problem.