



CANDIDATO(A): _____

CURSO: _____ DATA: ____/____/____

FORMA A

1 **Research and Scientific Method**

2 For a clear perception of the term research, one should know the meaning of scientific method.
3 The two terms, research and scientific method, are closely related. Research, as we have already
4 stated, can be termed as “an inquiry into the nature of, the reasons for, and the consequences of
5 any particular set of circumstances, whether these circumstances are experimentally controlled
6 or recorded just as they occur.” Further, research implies the researcher is interested in more than
7 particular results; he is interested in the repeatability of the results and in their extension to more
8 complicated and general situations. On the other hand, the philosophy common to all research
9 methods and techniques, although they may vary considerably from one science to another, is
10 usually given the name of scientific method. In this context, Karl Pearson writes, “The scientific
11 method is one and same in the branches (of science) and that method is the method of all logically
12 trained minds... the unity of all sciences consists alone in its methods, not its material; the man
13 who classifies facts of any kind whatever, who sees their mutual relation and describes their
14 sequences, is applying the Scientific Method and is a man of science.” Scientific method is the
15 pursuit of truth as determined by logical considerations. The ideal of science is to achieve a
16 systematic interrelation of facts. Scientific method attempts to achieve “this ideal by
17 experimentation, observation, logical arguments from accepted postulates and a combination of
18 these three in varying proportions.” In scientific method, logic aids in formulating propositions
19 explicitly and accurately so that their possible alternatives become clear.

20 Further, logic develops the consequences of such alternatives, and when these are compared with
21 observable phenomena, it becomes possible for the researcher or the scientist to state which
22 alternative is most in harmony with the observed facts. All this is done through experimentation
23 and survey investigations which constitute the integral parts of scientific method.

24 Experimentation is done to test hypotheses and to discover new relationships. If any, among
25 variables. But the conclusions drawn on the basis of experimental data are generally criticized
26 for either faulty assumptions, poorly designed experiments, badly executed experiments or faulty
27 interpretations. As such the researcher must pay all possible attention while developing the
28 experimental design and must state only probable inferences. The purpose of survey
29 investigations may also be to provide scientifically gathered information to work as a basis for
30 the researchers for their conclusions.

31 The scientific method is, thus, based on certain basic postulates which can be stated as under:

- 32 1. It relies on empirical evidence;
33 2. It utilizes relevant concepts;
34 3. It is committed to only objective considerations;
35 4. It presupposes ethical neutrality, i.e., it aims at nothing but making only adequate and correct
36 statements about population objects;



- 37 5. It results into probabilistic predictions;
38 6. Its methodology is made known to all concerned for critical scrutiny are for use in testing the
39 conclusions through replication;
40 7. It aims at formulating most general axioms or what can be termed as scientific theories.
- 41 Thus, “the scientific method encourages a rigorous, impersonal mode of procedure dictated by
42 the demands of logic and objective procedure.” Accordingly, scientific method implies an
43 objective, logical and systematic method, i.e., a method free from personal bias or prejudice, a
44 method to ascertain demonstrable qualities of a phenomenon capable of being verified, a method
45 wherein the researcher is guided by the rules of logical reasoning, a method wherein the
46 investigation proceeds in an orderly manner and a method that implies internal consistency.

(Fonte: Research Methodology: Methods and Techniques. New Age. 2004. p. 9-10)

IMPORTANTE: APÓS A LEITURA DO TEXTO, RESPONDA O QUE SE PEDE EM PORTUGUÊS. LEMBRE-SE DE QUE SUAS RESPOSTAS DEVEM ESTAR CONTIDAS NO TEXTO; NÃO EM CONHECIMENTOS PRÉVIOS QUE NÃO TENHAM SIDO MENCIONADOS.

PARTE 1 – Responda as perguntas abaixo de acordo com o texto.

1.1 De acordo com o autor, qual a definição para o termo ‘Pesquisa’?

1.2 De acordo com Karl Pearson, como se dá a aplicação do Método Científico?

1.3 Por que as conclusões baseadas em dados experimentais são geralmente criticadas?

(20 pontos cada)



PARTE 2 – Marque (V) para VERDADEIRO ou (F) para FALSO de acordo com o texto. Indique a(s) linha(s) do texto onde se encontra a informação que justifique sua resposta.

2.1 () Além de resultados gerais, o pesquisador também está interessado na repetitividade.
Linha(s): _____

2.2 () A inter-relação sistemática de fatos pode ser alcançada pela experimentação, observação, argumentos lógicos dos postulados aceitos e uma combinação destes três em proporções variadas.
Linha(s): _____

2.3 () O método científico se baseia em evidências observáveis.
Linha(s): _____

2.4 () Previsões probabilísticas não são admitidas no Método Científico.
Linha(s): _____

2.5 () O Método Científico reforça o procedimento rigoroso e impessoal exigidos pela lógica e o objetivo de pesquisa.
Linha(s): _____

(10 pontos / 2 pontos cada)

PARTE 3 – Faça a tradução do trecho abaixo de acordo com as ideias do texto.

3.1 (...) a method wherein the researcher is guided by the rules of logical reasoning, a method wherein the investigation proceeds in an orderly manner and a method that implies internal consistency. (Linhas 44-46)

(30 pontos)