

Based upon TECHNIQUES OF VALUE ANALYSIS AND ENGINEERING
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Study Questions to Accompany
TECHNIQUES OF VALUE ANALYSIS AND ENGINEERING
Second Edition, 1972
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CHAP. 3 Evaluate the Function

33. What is meant by "Evaluating the Function"?
34. Name several progressing steps in "Evaluating a Function".
35. Why is a function evaluated?
36. How is a function evaluated?
37. When is a function evaluated?
38. How are inter-acting functions evaluated?
39. Name some comparisons which could be used to evaluate the basic function of a hammer.
40. Can aesthetic functions be evaluated by comparison?
41. Name a service with inter-acting functions. How do they inter-act?
42. Name a simple product with inter-acting functions. How do they inter-act?
43. Name a function in each of two products which could be evaluated by published data. Tell how it would be done.
44. What actions are required to cause decision makers to accept function values as guides and measurements?
45. Name the principal functions in problem 19-4, page 331. Arrange for evaluation. Tell how each might be evaluated.
46. Name the basic function, problem 19-12, page 333. Tell how it would be evaluated.

CHAP. 4 Problem Setting System (Making the Problem Precise and Solvable)

47. What is meant by "Problem Setting"?
48. What is the purpose of problem setting?
49. Why is problem setting required?
50. How is function study involved in problem setting?
51. What is the first step in problem setting?
52. Name the main functions of a twist type garden hose nozzle.
53. Now, further separate, list and group all functions and sub-functions of the nozzle.
54. Why is optimum grouping of the functions and sub-functions of the nozzle now essential?
55. Now adjust, if needed, the grouping of the functions and sub-functions in a manner which promotes creative solutions.
56. Why must costs desired, required and probably achievable be developed in this stage?
57. How are these costs determined?
58. Identify, name and separate and/or group the functions of 19-20, page 334.
59. In general, how would you start setting the problem if:
 You were operating a TV repair business
 The maximum price you could charge was set by competition
 You were losing money in spite of a good volume of work.
60. At what stage of value work will you develop at least tentative evaluation of functions?
61. Name the principal function groups which might be required in a domestic vacuum cleaner.

CHAP. 5 Problem Solving System (Job Plan)

62. What is the Problem Solving System of Value Analysis?
63. What parts of the system do you consider most vital?
64. In a small group of professional people how would you start "Mind Tuning"?

CHAP. 7 Setting and Solving Services Problems

90. What is the usual nature of the problem in a Services Group or organization?
91. What are five usual problems of a municipal government?
92. What are five usual problems of a hospital?
93. What are five usual problems of a state government?
94. What are five usual problems of a police department?
95. What is the four-step pattern of disciplined thinking as applied to a Services Problem?
96. Describe how the work covered by all expenses of a hospital is put into "Functional Language," and Function Thinking."
97. Name the steps usually needed in order to communicate properly to secure the support of essential people, when starting a study for the purpose of securing more services for the expenditures of a municipal government.
98. Name three points of similarity and three points of difference in applying the Value Analysis System to a service, as contrasted to a product.

CHAP. 8 Results Accelerators

99. Name ten "Generalities" which often stop thinking.
100. Name five ways to end "Action Blocking" by a generality.
101. Name ten difficulties often encountered in getting meaningful costs and properly interpreting them.
102. Name six means which might be used to determine who was the best source of accurate facts on any situation.
103. Name six best sources for information to use in the project of improving the value in problem 19, page 334.
104. What does the "Blast, Create, Refine" approach mean to you?
105. In Value Analysis work, what is a "Roadblock"?
106. Identify five common situations in which roadblocks end thinking on a project.
107. How are roadblocks ended?
108. What do you tell an "Industry Specialist" who is invited into a job to help you? What do you expect from him?
109. Name five reasons why persons are sometimes reluctant to call industry specialists for their specialized knowledge and help.
110. Name five situations in which you would call in an industry specialist for his knowledge, technique and assistance.
111. How would you determine the cost added by one particular tolerance?
112. How would you determine whether the cost of one particular tolerance was appropriate?
113. Name five reasons why the use of "Vendors' Functional Products" often improves value.
114. Name five reasons why they are often not utilized.
115. Why should also "Vendors' Skills and Knowledge" be used?
116. Name five reasons why vendors' skills and knowledge are often not used.
117. Name three ways of paying a vendor for the contribution made by his skills and knowledge.

CHAP. 11 Understanding the Decision Environment

137. What two separate types of work are required to improve value?
138. Why is the creation of a constructive "Decision Environment" most difficult?
139. Why does "Change" bring risk of personal loss?
140. What injury, or personal loss, is sometimes inflicted by change?
141. Who, in the decision environment, is the source of the personal loss?
142. What is "Embarrassment"?
143. In the decision environment, what causes embarrassment?
144. How does "Fear of Embarrassment" operate to continue the past, rather than to seriously work toward making a change?
145. How do emotions effect decisions?
146. How does embarrassment injure decision makers?
147. Describe five types of situations in which "Feelings", or "Emotions" tend to continue uncontributing costs.
148. Name the three classes of criteria which govern decision making, and vary from person to person.
149. Why do "Feelings" influence, often control, decisions?
150. How are "Feelings" changed?
151. Why are many decision environments hazardous to new approaches?
152. Name some methods of minimizing fear of personal loss to decision makers.
153. Name five "Management Beliefs" essential to a decision environment in which good value decisions can be made with minimal risk of embarrassment or personal loss.

CHAP. 12 Effect on Other Work in the Business

154. Write a paragraph on "The Relationship of the Value Analysis System to Accounting."
155. Ditto to Appearance Design."
156. Ditto to Cost-reduction Activities."
157. Ditto to Engineering."
158. Ditto to Manufacturing."
159. Ditto to Management."
160. Ditto to Purchasing."
161. Ditto to Quality Control."
162. Ditto to Marketing and Sales."

CHAP. 13 Effective Organization for Value Work

163. What, if anything, is wrong with the "Everybody Does It" plan for accomplishing functions at competitive costs?
164. On the premise that to secure good profits in highly competitive businesses, expertise in value techniques is essential. When would you:
 - a. Develop Value Skills in everyone?
 - b. Use Value Specialists?
165. How would you secure the benefit of the value techniques for:
 - a. Business with annual volume up to \$200,000.?
 - b. Business with annual volume between \$200,000. and \$2,000,000.?
 - c. Ditto - business up to \$100,000,000.?
 - d. Ditto - a few billion?
166. In a large product manufacturing business using four consultants, name the four different skills you would endeavor to include in the group.

CHAP. 16 Motivation, Measurement, Tests

190. Describe the two forces, one of which is necessary to motivate a business to improve its value.
191. Briefly describe the four forms of motivation, some of which are required to cause a manager to take actions to improve value.
192. For Value Analysts and others who are using the system:
 - a. How can suitable "Emphasis" be established and communicated?
 - b. How is adequate "Support" established and communicated?
 - c. How must appropriate "Status" be established?
 - d. Why is it often difficult to establish "Fair Measurement"?
 - e. Name three methods of providing proper recognition.
193. Briefly describe each of the five forms of motivation, all of which are essential to motivate decision makers.
194. How will you determine "How Well the VA System is Understood"?
195. How will you determine "How Well the VA System is Suited to the Business Involved"?
196. How will you determine "How Correctly the VA Operation is Set Up"?
197. How will you determine "How Effectively the Value Analysts are Operating"?
198. Name some miscellaneous factors which, if properly handled, will enhance results.
199. In measuring the work of the people, how will you measure the appropriateness of their "Integration" activities?
200. How will you measure the effectiveness and quantity of their "Consultation" work?
201. How will you measure quality and appropriateness of amount of "Training" activity?
202. What is a major pitfall to avoid in attempting to measure the quality and amount of work in the "Value Appraisal" area?
203. How would you provide "Fair Measurement" of the appraisal work?
204. How would you test prospective Value Specialists to determine if they possess the minimum essential Personality Traits, Knowledge of the VA System, and Skill in using it, to meet your needs?
205. In reviewing work done, how would you determine, beyond doubt, whether the VA System was known and being used?

CHAP. 17 Advanced Techniques

206. What is the purpose of the Function Analysis System Technique?
207. What is called a "Higher-Level" function?
208. How is the "Higher-Level" function determined?
209. What information does the question "How" lead to?
210. In the FAST diagram, what are the "Scope" lines?
211. How are they located?
212. How is the "Time the function must be performed" handled?
213. What is the "Critical Path"?
214. What are "Secondary Paths"?
215. Are costs assigned to the functions in the FAST diagram?
216. Make up the matrix for a pair of shoes for every-day business wear for men. From it, state your tentative choice, or other conclusion. See next page for necessary data.