

Questions

1. *What is another name for time study?*

Another name for time study is work measurement.

2. *What is the principal objective of methods engineering?*

The principle objective of methods engineering is to improve productivity and decrease the unit cost of output while maintaining the health and safety of the worker.

3. *List the eight steps in applying methods engineering.*

The eight steps of methods engineering are: 1) select the project, 2) get and present the data, 3) analyze the data, 4) develop the ideal method, 5) present and install the method, 6) develop a job analysis, 7) establish time standards, 8) follow up the method.

4. *Where were time studies originally made and who conducted them?*

Time studies originated In France in the manufacture of pins by Perronet.

5. *Explain Frederick W. Taylor's principles of scientific management.*

The principles of scientific management included: time study, standardization of all tools and tasks, use of a planning department, use of slide rules and other time saving implements, instruction cards for workers, bonuses for successful performance, differential rates, mnemonic systems classifying products, routing systems and modern costs systems.

6. *What is meant by motion study, and who are the founders of the motion study technique?*

Motion study is the study of body motions used in performing an operation, with the thought of improving the operation by eliminating unnecessary motions and simplifying necessary motions, and then establishing the most favorable motion sequence. Frank and Lilian Gilbreth are considered the founders of motion study.

7. *Was the skepticism of management and labor toward rates established by 'efficiency experts' understandable? Why or why not?*

Yes, many unqualified analysts endeavored to establish standards. The results, in some instance, were quite unsatisfactory giving the profession a poor image.

8. *Which organizations are concerned with advancing the ideas of Taylor and the Gilbreths?*

The American Management Association, The Society for the Advancement of Management, and The Institute of Industrial Engineers are concerned with promoting the ideas of Taylor and the Gilbreths.

9. *What psychological reaction is characteristic of workers when methods changes are suggested?*

Resistance to change is very common in workers when methods changes are suggested.

10. *Explain the importance of the humanistic approach in methods and time study work.*

The humanistic approach must be followed in order to help assure the success of methods and standards work. Regardless of the analyst's technical knowledge and ability, the analyst will not be completely successful in methods and time study work unless the analyst is competent in dealing with the human element.

11. *How are time study and methods engineering related?*

Time study should not be undertaken until a good method has been developed and installed.

12. *Why is work design an important element of methods study?*

Work design is an important element of methods study, because if the methods changes are inefficient or even injurious to the operators, any productivity improvements will be negated by increased medical and safety costs.

13. *What important events have contributed to the need for ergonomics?*

The technological disasters at Three-Mile Island and Bhopal, India as well as the increase in product liability and personal injury cases have contributed to a need for ergonomics.