Lesson 10 Design of Work Systems

57. Behavioral approaches to job design include:
A. Specialization
B. Ergonomics
C. Job Rotation
D. Flow Process Charts
E. SIMO Charts

58. A major advantage of job specialization in business is increased:
A. motivation
B. opportunity for advancement
C. opportunity for self-fulfillment
D. productivity
E. job enrichment

59. Which of the following is not generally considered an advantage of specialization?
A. high productivity
B. low wage costs
C. ease of training employees
D. low equipment costs
E. all are advantages

60. Process chart symbols don't include …
A. Delay
B. Inspection
C. Operation
D. Rejection
E. Storage

61. Which of the following most closely describes job enlargement?
A. horizontal loading
B. increasing the level of responsibility associated with a job
C. transferring workers through a series of jobs to increase their scope of experience
D. increasing the amount of workspace assigned to a worker
E. assigning two jobs to the same worker

62. A behavioral approach to job design which increases responsibility for planning and coordinating tasks is job:
A. enlargement
B. rotation
C. enrichment
D. involvement
E. enhancement

63. Which of the following concerns is not one that job designers focus on?
A. what will be done in a job
B. who will do the job
C. how the job will be done
D. when should the job be completed
E. where the job will be done

64. Which of the following is not a potential benefit of the use of self-directed teams?
A. higher quality
B. higher productivity
C. greater worker satisfaction
D. greater satisfaction for middle managers
E. lower turnover
65. A SIMO chart includes:
A. Delay
B. Storage
C. Transportation
D. Left/Right hand movements
E. Inspection

66. Determining the number of cycles to observe is an element of…
A. Stop watch time study.
B. Standard elemental times.
C. Predetermined time standards.
D. Work sampling.
E. MTM tables.

67. The chart used to review the overall sequence of an operation by focusing on either the movements of the operator or materials is called a:
A. SIMO-chart
B. Gantt chart
C. Worker-materials chart
D. Flow process chart
E. Multi-activity chart

68. The methods analysis chart which describes the overall sequence of operations, transportation, storage, delays, and inspection is a:
A. flow process chart
B. worker-machine chart
C. gang process chart
D. simultaneous-motion (SIMO) chart
E. time/efficiency chart

69. The symbols for operation, storage, transportation, inspection, and delay would usually be found on which type of chart?
A. Flow process
B. Gantt
C. Simultaneous motion
D. Worker-machine
E. Delay analysis

70. The chart used to focus on busy and idle portions of a work cycle is a:
A. Worker-machine chart
B. Gantt chart
C. SIMO-chart
D. Idle chart
E. Flow process chart

71. The methods analysis chart which describes the portions of a work cycle during which an operator and equipment are busy or idle is a:
A. flow process chart
B. worker-machine chart
C. gang process chart
D. simultaneous-motion (SIMO) chart
E. time/efficiency chart

72. In methods analysis, a "therblig" is a:
A. charting method of analysis
B. job enrichment technique
C. dummy task
D. basic elemental motion
E. fraction (.0006) of a minute
73. The methods analysis chart which describes the movements of both hands at the same time is a:
A. flow process chart
B. worker-machine chart
C. gang process chart
D. simultaneous-motion (SIMO) chart
E. time/efficiency chart

74. One form of long term team that is increasingly being used, especially in lean production settings, is:
A. Quality circle
B. Product Design
C. Self-directed
D. Self-improvement
E. Mandatory

75. In a stopwatch time study, the number of cycles that must be timed is a function of:
A. the variability of observed times
B. the desired accuracy for the estimated job time
C. the desired confidence for the estimated job time
D. all of the above
E. none of the above

76. What is the effect of an increase in the desired confidence level on the number of observations necessary in a time study?
A. increases
B. decreases
C. unaffected
D. may increase or decrease, depending on the sample standard deviation
E. impossible to say without additional information

77. In a stopwatch time study, the average time it takes a given worker to perform a task a certain number of times is the:
A. observed time
B. normal time
C. standard time
D. allowance time
E. performance rating time

78. Which is not a requirement for an effective team?
A. talent and skills to meet goals
B. one or more members representing supervision
C. a system of reinforcement and celebration
D. clearly stated and commonly held vision and goals
E. effective and skilled interpersonal relations.

79. A job had an observed cycle time of four minutes, a performance rating of 80 percent, and an allowance factor that was 20 percent of job time. Normal time for the job in minutes is:
A. 3.20
B. 3.84
C. 4.00
D. 4.80
E. 5.00

80. When performing a time study, the analyst converts the observed time into the time an "average" worker would require working at an acceptable pace by using which of the following?
A. allowance factors
B. MTM
C. methods analysis
D. performance rating
E. analysis of therbligs
81. In stopwatch time study, adjusting the normal time by an allowance factor for normal delays and interruptions results in the:
A. observed time
B. normal time
C. standard time
D. allowance time
E. performance rating time

82. A job had an observed time of 10 minutes, a performance rating of .90, and an allowance factor of 20 percent of job time. Twenty-five cycles were timed. Standard time for the job in minutes is:
A. 10.0
B. 10.8
C. 12.5
D. 15.0
E. depends on the number of cycles observed

83. A job has a normal time of 12 minutes, a performance rating of .80, and an allowance factor of 20 percent of job time. The standard time for this job in minutes is:
A. 11.52
B. 12
C. 14.4
D. 15
E. depends on the number of cycles observed

84. Standard times derived from a firm's historical data are known as:
A. predetermined times
B. MTM
C. work sampling times
D. judgmental times
E. standard elemental times

85. Allowance percentages normally would not include:
A. noise levels
B. monotony
C. personal phone calls
D. weight lifted
E. rest room allowances

86. A technique for estimating the proportion of time a worker spends on various activities is:
A. stopwatch time study
B. standard elemental (historical) times
C. simultaneous motion study
D. predetermined (published) time standards
E. work sampling

87. The technique which can be used to estimate the percentage of time a worker or piece of equipment is idle is known as:
A. MTM
B. work sampling
C. methods analysis
D. micro motion study
E. none of these

88. Which sample proportion will require the largest number of work sampling observations?
A. .05
B. .25
C. .50
D. .75
E. .95
89. What will be the effect on sample size in work sampling of increasing the permissible maximum error?
A. increase the number of observations needed
B. decrease the number of observations needed
C. no effect on sample size
D. sometimes increase and sometimes decrease the sample size, depending on the analyst
E. impossible to say without additional information

90. In work sampling, observations should be taken:
A. at the same time each day
B. within a short period of time
C. at randomly determined times
D. once every hour
E. once every day

91. Which of the following is not an advantage of work sampling compared to stopwatch time study?
A. There is little or no disruption of work.
B. It is less susceptible to short-term fluctuations.
C. Workers are less resentful.
D. It is less costly and less time-consuming.
E. It is better suited for short, repetitive tasks.

92. Which of the following is not characteristic of time-based compensation plans?
A. stable labor costs
B. easier to administer than output-based plans
C. stable pay for workers
D. simpler wage computations than output-based plans
E. lower cost per unit than output-based plans

93. Which of the following statements should not characterize an operations strategy toward the design of work systems?
A. Manufacturing technology is the heart of a business.
B. Workers can make or break a business.
C. Workers can be a valuable source of insights.
D. A spirit of cooperation can contribute to success.
E. Workers can be proud and respected.

94. The design of work systems involves:
A. work measurement
B. job design
C. compensation
D. all of the above
E. use of outside human resource consultants

95. Methods analysis and motion study techniques develop which aspect of jobs?
A. behavioral aspects
B. efficiency aspects
C. pay levels
D. all of the above
E. none of the above

96. A disadvantage of teams is:
A. higher quality
B. higher productivity
C. greater worker satisfaction
D. team member conflict
E. lower turnover