SAMPLE QUESTIONS

The questions below are designed to help you study for you hand out accordingly.

1. What term describes a vertical expansion of job duties in order to give the worker more responsibility?

    a. Job enlargement
    b. Job rotation
    c. Job enrichment
    d. Job design

2. What are the two basic types of production systems?

    a. Automated and manual
    b. Intermittent and non-intermittent process
    c. Normal and continuous process
    d. Continuous process and batch

3. What type of process would a paper mill be most likely to use?

    a. Continuous flow
    b. Project
    c. Job shop
    d. Flow shop

4. What technique deals with the problem of supplying sufficient facilities to production lines or individuals that require uneven service?

    a. Supply-demand theory
    b. PERT
    c. Inventory theory
    d. Queuing theory

5. A manufacturer has been receiving excessive numbers of defective standard machine parts from a vendor on a regular basis. What is the most effective way to design a formal inspection system for incoming parts?

    a. Queuing analysis
    b. Time series analysis
    c. Statistical quality control
    d. Regression analysis

6. A set of simultaneous equations that has more variables than constraints has

    a. no solution
    b. an infinite number of solutions
    c. a finite solution
    d. an infinite solution

7. In a PERT/CPM network, computing the critical path requires

    a. determining the total project duration
    b. assigning the earliest finish time for an activity as the earliest start time for the next
    c. that the latest finishing time for an activity not delay the overall project beyond initial expectation
    d. a sophisticated and complex computer program

8. At the completion of the forward and backward passes, the slack for an activity is given by the

    a. difference between early start and early finish
    b. difference between early start and latest finish
    c. difference between latest start and early finish
    d. amount of idle labor on the critical path

9. What type of control chart is used to monitor the number of defects per unit?

    a. p-chart
    b. R-chart
    c. c-chart
    d. x-bar chart

10. A project has three paths: A—B—C has a length of 25 days. A—D—C has a length of 15 days. A—E—C has a length of 20 days. Which of the following statements is correct?

    a. A—D—C is the critical path.
    b. A—B—C has the most slack.
    c. The expected duration of the project is 25 days.
    d. The expected duration of this project is 60 days.

11. The operating characteristic (OC) curve shows the probability of

    a. rejection for every possible true percentage of defectives
    b. acceptance for every possible true percentage of defectives
    c. making type I errors for various percentages of defectives
    d. none of the above

12. If an artificial variable remains in the solution with a positive value after the stopping criterion has been reached, the problem

a. is infeasible
b. is optimal
c. needs a new basis
d. has more than one solution

13. What are the two sources of costs in queuing analysis?

a. Arrivals and departures
b. Arrivals and idleness
c. Waiting customers and capacity
d. Equipment breakdowns and departures

14. The transportation model method that is used to evaluate location alternatives minimizes total

a. sources
b. destinations
c. capacity
d. shipping costs

15. What is simulation?

a. A quick solution method to problem-solving
b. A formalized deterministic approach to problem-solving
c. A graphical method to problem-solving
d. A trial-and-error approach to problem-solving

16. What priority rule is being used when jobs are processed according to the lowest ratio of due date to remaining processing time?

a. CR (critical ratio)
b. EDD (earliest due date first)
c. FCFS (first come, first served)
d. S/O (least slack per operation first)

17. Moving from the aggregate plan to a master production schedule requires

a. rough cut capacity planning
b. sub-optimization
c. disaggregation
d. strategy formulation

18. Which of the following statements is true of Lean-Six Sigma?

a. Lean principles focus on advanced statistical methods.
b. Lean principles and Six-Sigma are separate bodies of knowledge
c. Lean principles have been developed over a lengthy period of time.

d. Lean principles include the 5Ss framework and practices.

19. When the flow of materials is variable,

a. layout by process is most suitable
b. layout by product is most suitable
c. layout by fixed position is most suitable
d. line balancing is most suitable

20. A fixed interval system

a. adds the same predetermined amount to inventory each time replenishment occurs
b. is suitable for joint replenishment items
c. is triggered at the reorder level
d. requires perpetual monitoring of inventory records

ANSWERS TO SAMPLE QUESTIONS

1. (**c**)
2. (**b**)
3. (**a**)
4. (**d**)
5. (**c**)
6. (**b**)
7. (**b**)
8. (**a**)
9. (**c**)
10. (**c**)
11. (**b**)
12. (**a**)
13. (**c**)
14. (**d**)
15. (**d**)
16. (**a**)
17. (**c**)
18. (**d**)
19. (**a**)
20. (**b**)