Operations Study Questions

1. Intermittent flow operations:

b. involve close management of workers.

c. generate a low product mix.

d. have many schedule changes.

e. have high turnovers of raw materials and

work-in-process inventories.

2. Continuous flow operations:

a. utilize dedicated equipment.

b. are labor-intensive operations.

c. have unpredictable material flows.

d. have work centers grouped together by

function (department).

3. Repetitive manufacturing:

a. heavily converts raw materials into finished parts

and components.

b. produces one basic product with minor variations.

c. produces a limited menu of products sharing common

parts, processes, etc.

d. utilizes highly trained, flexible labor.

4. Design capacity is:

a. theoretical capacity.

b. capacity dictated by the firm's built-in organizational

constraints.

c. the ratio of actual output to design capacity.

d. actual output.

5. The stepping-stone method is used to:

b. obtain an initial (1st) solution.

c. balance source supply and destination

demand.

d. evaluate empty cells (routes) for possible

cost reductions.

e. evaluate occupied cells (routes) for possible

cost reductions.

6. Which of the following statements is true?

a. evaluation paths selected must be as long

as possible.

b. evaluation paths may contain diagonal move-

ments.

c. occupied cells may be bypassed if turning

movements are not desired.

d. all occupied cells of each solution must be eval-

uated.

7. The intent of the load-distance model is:

a. to minimize the number of workers.

b. to maximize work station productive time.

c. to minimize idle time per cycle.

d. to minimize materials and / or information

movement costs within a process layout.

8. Which of the statements about line-balancing is best?

a. if a precedence relationship exists between tasks

A and B, they cannot be assigned to the same

work station.

b. if a line's balance delay factor is minimized, its

efficiency is maximized.

c. the theoretical minimum number of work stations

can never be achieved, hence the name "theoretic-

cal".

d. if the desired output rate increases, the cycle time

also tends to increase.

9. Hybrid or combination layouts:

b. require the use of work-in-process inventories between

the pure layouts.

c. were developed by Henry Gantt in 1901.

d. are similar in their characteristics to fixed-position layouts.

e. are rarely encountered in industry.

10. Which of the following statements is true?

a. line-balancing attempts to eliminate bottleneck tasks

via product redesign and better worker training.

b. the efficiency of an assembly line can be improved by

selecting a different task assignment heuristic for the

line-balancing process.

c. an assembly line is perfectly balanced when there are an

equal number of tasks in each work station.

d. "effectiveness" is defined as an assembly line's ability to

meet desired daily output.

11. The Behavioral School approach to job design which attempts to

make a worker a "co-manager" is:

a. job enrichment.

b. job enhancement.

c. job rotation.

d. job enlargement.

12. The 5 categories of activities (operation, transport, inspection, delay,

and storage) are used in which of the following methods of process

analysis?

a. multiple activity chart.

b. gang chart.

c. simo chart.

d. motion economy chart.

13. The procedure that involves performance ratings and allowance

factors is:

a. direct time study. c. historical experience.

b. pre-determined time study. d. work sampling.

14. Hybrid or combination layouts:

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18. The procedure that involves performance ratings and allowance

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True or False: (select the one correct response)

14. In cross-docking, labeled and presorted loads are received directly at

the warehouse dock for immediate re-routing.

TRUE FALSE

15. A job shop helps a firm follow a differentiation marketing strategy.

TRUE FALSE

16. Group technology layouts are used to convert job shops into assembly lines.

TRUE FALSE

17. The Northwest-Corner technique produces a deliberate cost-efficient solu-

tion for the transportation algorithm.

TRUE FALSE

18. Work sampling is widely used to analyze non-repetitive jobs.

TRUE FALSE

19. The minimum allowable cycle time guarantees that the firm will meet its

daily production quota.

TRUE FALSE

20. The direct time study method makes allowances for unscheduled

interruptions, unusual delays, and unusual mistakes on the part

of the worker.

TRUE FALSE