Sample Questions

Industrial Engineering

1. The characteristic life cycle of a product consists of four periods. During which period does the rate of consumption attain its maximum value?

    a. Incubation period
    b. Growth period
    c. Maturity period
    d. Decline period

2. Which of the following failures is attributed to the application of stress beyond the stated capabilities?

    a. Gradual failure
    b. Sudden failure
    c. Inherent, weakness failure
    d. Misuse failure

3. Company XYZ has an annual demand of 1,000 units. The ordering cost is $ 100 per order and the carrying cost is $ 100 per unit. If the stock-out cost is $ 400 each time the company runs out-of-stock, determine the safety stock required that would justify the carrying cost?

    a. 400
    b. 40
    c. 20
    d. 100

4. Which of the following is/are false based on the general characteristics of the different types of layout?

1. Work-in-process and throughput time are high in process layout.
2. Production cost per unit is high in product layout.
3. Work-in-process and throughput time is high in product layout.

    a. Both 1 and 2
    b. Both 2 and 3
    c. Only 1
    d. Only 3

5. Which of the following statements is correct?

    a. Stop watch is not used in work study.
    b. Bar charts are suitable for major work only.
    c. Material handling in automobile industry is never done by overhead cranes.
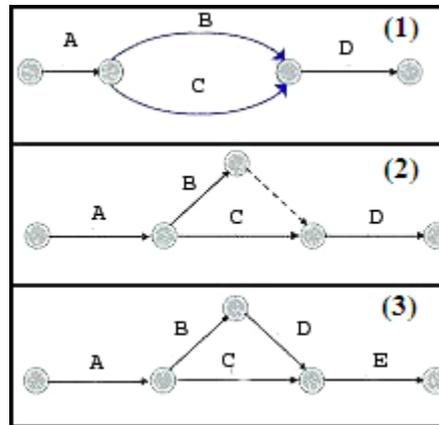   d. In time study, standard time is less than normal time.

6. Which of the following statements is false regarding a delay in the activity which is on the non-critical path?

    a. The delay could increase the project completion time.
    b. The delay would not affect the project completion time, if amount of delay is less than total slack.
    c. The delay would decrease the project completion time, if amount of delay exceeds total slack.
    d. The delay would increase the project completion time, if amount of delay exceeds total slack.

7. An engineer estimates the reliability of a system by $R(t)= (1-t/t')^2$ for $0<=t<t'$; and 0 otherwise. Determine the MTTF?

    a. t'
    b. $t'/8$
    c. $t'/2$
    d. $t'/3$

8. Which of the following network diagrams (shown in the figure) is/are incorrect?

a. 1
b. 2
c. 3
d. Both 1 and 3
e. Both 2 and 3

9. Which of the following statements is true about simple moving average method of forecasting?

a. Forecast sensitivity decreases if the length of the average period decreases.
b. Forecast sensitivity increases if the length of the average period decreases.
c. Forecast sensitivity remains constant if the length of the average period decreases.