

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.

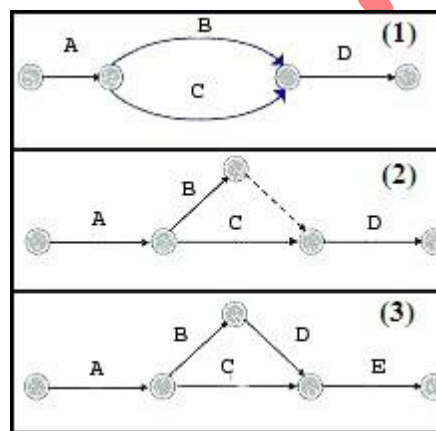
6. Which of the following statements is false regarding a delay in the activity which is on the non-critical path?

- 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 $0 \leq t < t'$; 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.