

**QUIZ # 02**  
**MGT-613**  
**PRODUCTIONS & OPERATIONS MANAGEMENT**

**INSTRUCTIONS:**

**You are required to put answers in the following format. Solutions not following this format will be marked as 'ZERO'.**

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

**QUESTIONS:**

- 1. Which one of the following is the overall objective of product and service design?**
  - a) Customer satisfaction and variety
  - b) Reliability and variety
  - c) Quality and reliability
  - d) Customer satisfaction and profitability
  
- 2. Which one of the following statements is true about OSHA?**
  - a) To safeguard against potential hazards
  - b) To develop cost effective processes
  - c) To implement legal standards
  - d) To carry out implication of manufacturability and fitness
  
- 3. Which one of the following is the most significant disadvantage of standardization?**

- a) Frozen designs
- b) Interchangeable parts
- c) Reduced variety
- d) Customized parts

**4. Which one of the following is the final stage of product life cycle?**

- a) Growth
- b) Decline
- c) Maturity
- d) Planning

**5. \_\_\_\_\_ is the bringing together of engineering design and manufacturing personnel early in the design phase.**

- a) Reverse engineering
- b) Concurrent engineering
- c) Manufacturability
- d) Serviceability

**6. Robustness of a product is \_\_\_\_\_ related with the probability of failure.**

- a) Directly
- b) Inversely
- c) Linearly
- d) Positively

**7. Which one of the following mathematical expressions can be used to compute availability?**

- a)  $(MTBF) / (MTBF + MTR)$
- b)  $(MTBF) / (MTBF - MTR)$
- c)  $(MTR) / (MTBF + MTR)$
- d)  $(MTR) / (MTBF - MTR)$

**8. A product 'A' is specified to work well up to 30 degree Celsius temperature and 30% humidity. What would these specifications represent?**

- a) Reliability factor
- b) Standard conditions
- c) Normal operating conditions
- d) Standard operating procedure

**9. Which one of the following is a curve showing failure rate over time?**

- a) Cost curve
- b) Bath tub curve
- c) Fish bone diagram
- d) Reliability curve

**10. The frequency of capacity choice decisions is influenced by all of the following factors EXCEPT:**

- a) Stability of demand
- b) Technological changes
- c) Competitive forces
- d) Cost factor

**11. Which one of the following refers to the maximum output that a firm can produce under ideal conditions?**

- a) Design capacity
- b) Effective capacity
- c) Capacity planning
- d) Utilization rate

**12. The process selection should take into account all of the following EXCEPT:**

- a) Capacity planning
- b) Design of work systems
- c) Production forecasts
- d) Selection of technology

**13. The type of processing structure that is used for producing discrete products at higher volume is:**

- a) Continuous Flow
- b) Assembly Line
- c) Batch
- d) Job Shop

**14. The type of processing structure that is used to produce gasoline, chemicals, and steel is known as.**

- a) Job Shop
- b) Batch
- c) Assembly Line

d) Continuous Flow

**15. In which of the following layouts, work stations are arranged according to the general function they perform without regard to any particular product?**

- a) Product
- b) Process
- c) Fixed-position
- d) Storage

**16. Which one of the following is the correct order of layout types from low volume/high variety to high volume/low variety?**

- a) Fixed position, process, cell, product
- b) Fixed position, cell, process, product
- c) Fixed position, process, product, cell
- d) Process, fixed position, cell, product

**17. Which one of the following statements is NOT correct about cycle time?**

- a) It represents daily operating time divided by desired production
- b) It is the maximum allowable time at each work station
- c) It determines the time often items take to roll off in assembly line
- d) It is the time required to complete a product from start to finish

**18. What would be the required cycle time for a process that operates 9 hours daily with a desired output of 300 units per day?**

- a) 0.03 minutes
- b) 1.8 minutes
- c) 2700 minutes
- d) 33.33 minutes

**19. What would be the output capacity if an assembly line operates for 7 hours per day with a cycle time of 2.0 minutes?**

- a) 210 units per day
- b) 3.5 units per day
- c) 0.004 units per day
- d) 14 units per day

**20. Which one of the following is TRUE about work sampling?**

- a) It describes individual human motions that are used in a job task

- b) It involves determining the length of time it will take to undertake a particular task
- c) It involves determining the amount of time a worker spends on various activities
- d) It providing standard times for micro motions such as reach, move and release

**GOOD LUCK!**