

FMEA-TEST

NAME: _____

Check each statement and choose an answer or a relationship that better suits the question or statement.

1. The term “*failure mode*” is defined as the:
(A) consequence of the mechanism through which a failure occurs
(B) physical, chemical, electrical, or thermal process that results in failure
(C) event or inoperable state in which an item or part of an item does not perform as specified
(D) failure caused by the failure of an associated item
2. The influence of a failure mode and effects analysis (FMEA) on reliability is maximized at which of the following stages of development?
(A) Design
(B) Prototype
(C) Test
(D) Operation
3. _____ are any errors or defects, especially ones that affect the customer, and can be potential or actual
(A) Failures
(B) Mode
(C) Effects
(D) Analysis
4. QFD stands for:
(A) Quality Failure Design
(B) Quality Function Design
(C) Quality Function Deployment
(D) Quantity Failure Designs
5. An FMEA should be used only after developing control plans for a new or modified process.
(T) True
(F) False
6. “*What does the customer experience because of this failure?*” The answer to this question should be in which part of the FMEA process.
(A) Process Function
(B) Potential Failure Mode
(C) Potential Effects of Failure
(D) Potential Failure Cause
7. In a FMEA case, “no light, potential for injury to user”; should appear under:
(A) Process Function
(B) Potential Failure Mode
(C) Potential Effects of Failure
(D) Potential Failure Cause
8. In a FMEA case, “over pressure in lamp due to wrong gas”, should appear under:
(A) Process Function
(B) Potential Failure Mode
(C) Potential Effects of Failure
(D) Potential Failure Cause
9. “Failure affects safety” (Rank 9-10):
(A) Severity
(B) Criticality
(C) Occurrence
(D) Detection
10. “Failure is almost inevitable” (Rank 10):
(A) Severity
(B) Criticality
(C) Occurrence
(D) Detection

11. "Tests, procedures or mechanisms that you now have in place to keep failures from reaching the customer..."

- (A) Process Function
- (B) Potential Failure Mode
- (C) Potential Effects of Failure
- (D) Potential Failure Cause
- (E) Current Process Controls

12. "Is this failure mode associated with a critical characteristic?"

- (A) Severity
- (B) Classification
- (C) Occurrence
- (D) Detection

13. RPN, stands for:

- (A) Rank Priority Number
- (B) Risk Principal Number
- (C) Risk Priority Number
- (D) Rank Personal Number

14. "Failures are prioritized according to":

- (A) Design, Process, Manufacturing
- (B) System, Occurrence, Design
- (C) Severity, Process, Detection
- (D) Severity, Occurrence, Detection

15. "window of opportunity" in Quality Characteristics of Effective FMEAs refers to:

- (A) INTERFACES
- (B) TIMING
- (C) DOCUMENTATION
- (D) LEVEL OF DETAIL

16. If RPN = 360, and Severity = Occurrence, & Detection = 10, then Severity is:

- (A) 10
- (B) 6
- (C) 36
- (D) 8

17. If Severity = 5, Occurrence = 8 & Detection = 10, then Criticality is:

- (A) 40
- (B) 50
- (C) 80
- (D) 400

18. If Classification is "Yes", then severity (S) should be:

- (A) $1 \leq S \leq 10$
- (B) $S \leq 9$
- (C) $S \geq 9$
- (D) $S = 5$

19. "Preparation" in a FMEA process, consists of:

- (A) Determine the "failure modes"
- (B) Asses the probability of detection
- (C) Update the FMEA with lessons learned
- (D) Assemble the right team

20. "Follow-Up" in a FMEA process, consists of:

- (A) Determine the "failure modes"
- (B) Asses the probability of detection
- (C) Update the FMEA with lessons learned
- (D) Assemble the right team