

API

Exam API-580

Risk Based Inspection Professional

Version: 5.0

[Total Questions: 140]

Question No : 1

_____ to be established to judge acceptability of risk could be an objective of the risk assessment if such criteria do not exist already within the user's company.

- A. Risk criteria
- B. Risk plan
- C. Risk analysis

Answer: A

Question No : 2

Results of quantitative consequence analysis are usually expressed in

- A. Numeric
- B. Ranges from high to low
- C. Frequency
- D. Occasion

Answer: A

Question No : 3

Quantitative risk analysis logic models generally consist of _____ and _____

- A. Event trees and fault trees
- B. Product trees and loss trees
- C. Likelihood trees and consequence trees

Answer: A

Question No : 4

Act of mitigating a known risk to a lower level of risk.

- A. Risk reduction
- B. Risk management
- C. Risk mitigation

Answer: A

Question No : 5

When in accurate or insufficient failure data exists on the specific equipment item for quantative probability of failure analysis then

- A. General industry, company or manufacturer failure data used
- B. Process hazard analysis failure data may be used
- C. Process and toxic concentration analysis may be used

Answer: A

Question No : 6

In jurisdictions that permit the application of the API Inspection Codes and standards

- A. Rbi should be an acceptable method for setting inspection plans.
- B. Rem should be an acceptable method for setting the inspection plans
- C. Pha

Answer: A

Question No : 7

A physical condition or a release of a hazardous material that could result from component failure and result in human injury or death, loss or damage, or environmental degradation

- A. Hazard
- B. Loss
- C. Failure

Answer: A

Question No : 8

The following assumption can be made that significantly impacts the calculated corrosion rate early in the equipment life

- A. If the base line thickness were not performed the nominal thickness may be used for the original thickness
- B. If original thickness not available, averaged thickness readings may be used
- C. If the original thickness not available, maximum thickness readings may be used

Answer: A

Question No : 9

For a typical inspection program, if excessive inspection is applied then,

- A. Level of risk may go up
- B. Level of risk may go down
- C. Level of risk remain the same

Answer: A

Question No : 10

Reliability efforts, such as reliability centered maintenance (RCM), can be linked with RBI, resulting in an integrated program to

- A. Reduce downtime in an operating unit
- B. Reduce operating time of a unit
- C. To reduce risk by mitigation activities

Answer: A

Question No : 11

In most consequence evaluations, a key element in determining the magnitude of the consequence is

- A. The volume of fluid released
- B. Amount of surface area exposed due to toxic release
- C. Physical area impacted by release

Answer: A

Question No : 12

If the material of construction and internal/external conditions are the same

- A. Inspection results can be related from one equipment can be related to the other equipment
- B. We cannot do that, since we do not know about it
- C. Need to consult Equipment Engineer for final decision

Answer: A

Question No : 13

Combination of the probability of an event and its consequence

- A. Risk
- B. Failure
- C. Loss
- D. Reduction

Answer: A

Question No : 14

Process used to compare the estimated risk against given risk criteria to determine the significance of the risk.

- A. Risk evaluation
- B. Risk estimation
- C. Risk identification

Answer: A

Question No : 15

Equipment reliability is especially important if leaks can be caused by

- A. Secondary failures, such as loss of utilities
- B. Primary failures such as leak due to severe corrosion
- C. Tertiary failures due to valve gland packing leak

Answer: B

Question No : 16

Deterioration susceptibility and rate can be done

- A. By grouping the same material of construction/similar process/environment
- B. Not possible to group under any circumstances
- C. By random inspection method

Answer: A

Question No : 17

The ability to state the rate of deterioration precisely is affected by the following except

- A. By equipment complexity
- B. Type of deterioration mechanism, process and metallurgical variations
- C. Inaccessibility for inspection, limitations of inspection and test methods
- D. Lack of coverage of an area subject to deterioration
- E. None of the above

Answer: C

Question No : 18

_____ may result in the calculated corrosion rate appearing artificially high or low.

- A. Clerical error
- B. Measurement error
- C. Inspector error
- D. Ut scanning

Answer: B

Question No : 19

Rbi requires the commitment and cooperation of the

- A. Total organization
- B. Inspection
- C. Maintenance
- D. Materials engineering

Answer: A

Question No : 20

Risk presented in quantitative risk analysis as a

- A. Precise numeric value
- B. Form of risk matrix
- C. Form of event tree and fault tree

Answer: A

Question No : 21

Systematic use of information to identify sources and to estimate the risk

- A. Risk
- B. Risk analysis
- C. Hazard analysis

Answer: B

Question No : 22

In RBI program discrimination between equipment items on the basis of significance of potential failures.

- A. Failure analysis
- B. Determining failure modes
- C. Consequence analysis
- D. A&B

Answer: D

Question No : 23

Deterioration rates can be expressed in terms of

- A. Corrosion rates for thinning or susceptibility for mechanisms where deterioration rate is unknown
- B. Corrosion rates for thinning only
- C. Immeasurable quantity
- D. Discrete numbers
- E. Susceptible rates only

Answer: A

Question No : 24

_____ is usually not the primary objective of arbiassessment, but it is frequently a side effect of optimization.