

## **API API-580 Exam**

**Volume: 140 Questions**

Question No : 1

The data validation step stresses the need for knowledgeable individual.

- A. To comparing data from the inspections to the expected deterioration mechanism and rates
- B. To compare the results with previous measurements on that system
- C. Similar systems at the site or within the company or published data
- D. All of the above

Answer: D

Question No : 2

Following are the critical variables for deterioration mechanism except

- A. Material of construction
- B. Process operating
- C. Start up and shut down conditions
- D. Insulation

Answer: D

Question No : 3

If a qra has been prepared for a process unit, the analysis can borrow extensively from this effort.

- A. Rbi consequence
- B. Rbi likelihood
- C. Rbi probability

Answer: C

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Question No : 4

If the probability and consequence combination (risk) is high enough to be unacceptable, then

- A. A mitigation action to predict or prevent the event is recommended.
- B. A mitigation action to predict or prevent the event is not recommended
- C. Warrant to analyze risks involved

Answer: A

Question No : 5

A Rbi analysis shares many of the techniques and data requirements with a\_\_\_\_\_.

- A. Qra
- B. Pha
- C. Hazop
- D. Event tree

Answer: A

Question No : 6 CORRECT TEXT

\_\_\_\_\_ Produces inspection and maintenance plans for equipment that should be implemented to provide \_\_\_\_\_ and \_\_\_\_\_

Answer: Rbi, reliable, safe operation

Question No : 7

Following are some of the recognized risks which cannot be managed by inspection alone except one

- A. Equipment nearing retirement
- B. Failure mechanisms (such as brittle fracture, fatigue) where avoidance of failure primarily depends on operating within a defined pressure/temperature envelope
- C. Consequence-dominated risks

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D. The suitability and current condition of the equipment within the current operating envelope will determine the probability of failure (pof) of the equipment from one or more deterioration mechanisms

Answer: D

Question No : 8

Potential hazards identified in a pha will often affect the

- A. Probability of failure side of the risk equation.
- B. Consequence of failure side of the equation

Answer: A

Question No : 9

In RBI most of the probability assessment will be

- A. Only quality assessment
- B. Only quantity assessment
- C. Blend of quality and quantity assessment

Answer: C

Question No : 10

The primary audience for rp 580 is

- A. Inspection and materials engineering personnel
- B. Maintenance personnel
- C. Only inspection personnel
- D. Only materials engineering personnel

Answer: C

Question No : 11

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\_\_\_\_\_ is usually not the primary objective of a risk assessment, but it is frequently a side effect of optimization.

- A. Reducing inspection costs
- B. Increasing inspection costs
- C. Increasing frequency of inspection programs

Answer: A

Question No : 12

Probability of failure analysis is made from

- A. Loss of containment that occurs due to deterioration mechanism
- B. Consequences of the failure
- C. Done just with previous experience
- D. All the above

Answer: A

Question No : 13

If multiple inspections have been performed, which inspection may best reflect current operating conditions?

- A. Most recent inspection
- B. Base line inspection survey
- C. Process conditions
- D. Corrosion survey

Answer: A

Question No : 14

The type of failure mode that likely to occur due to mechanical and metallurgical deterioration

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- A. Smallholes to ruptures
- B. Cracks
- C. Catastrophic ruptures
- D. Leaks

Answer: C

Question No : 15

Hazard identification in a rbi analysis generally focuses on identifiable failure mechanisms in the equipment (inspectable causes) but does not explicitly deal with

- A. Other potential failure scenarios resulting from events such as power S failures or human errors
- B. Other potential failure resulting from events such as flammable fire due to leak from equipment
- C. Environmental impact caused due to toxic release

Answer: A

Question No : 16

Reliability efforts, such as reliability centered maintenance (rem), 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 : 17

Some failures have potentially serious consequences, but if the probability of the incident is low, then

- A. The risk may not warrant immediate action
- B. The risk may warrant immediate action