Assignment 1

The due date for submitting this assignment has passed. Due on 2019-02-13, 23:59 IST.

As per our records you have not submitted this assignment.

1) Which type of maintenance is also known as condition based maintenance (CBM)

   a. Reactive
   b. Predictive
   c. Periodic
   d. Breakdown

No, the answer is incorrect.
Score: 0
Accepted Answers: (b)

2) The risk priority number (RPN) is

   a. Minimum of the ranks of Severity (S), Occurrence (O), and Detection (D)
   b. Maximum of the ranks of Severity (S), Occurrence (O), and Detection (D)
   c. Sum of the ranks of Severity (S), Occurrence (O), and Detection (D)
   d. Product of the ranks of Severity (S), Occurrence (O), and Detection (D)

No, the answer is incorrect.
Score: 0
Accepted Answers: (d)
4) Machine availability is defined as

\[
\frac{\text{Up time}}{\text{Up time} + \text{Down time}}
\]

\[
\frac{\text{Up time}}{\text{Up time}}
\]

\[\text{Down time}\]

\[\text{Up time}\]

\[(\text{Up time} - \text{Down time})\]

(a)  
(b)  
(c)  
(d)  

No, the answer is incorrect.  
Score: 0  
Accepted Answers:  
(a)  
(b)  
(c)  
(d)  

5) The failure rate is high in infant mortality zone of bath-tub curve because of

(a) Installation defects  
(b) Wrong original equipment manufacturer (OEM) specification  
(c) Unfamiliarity of the machine operator  
(d) All of the above  

(a)  
(b)  
(c)  
(d)  

No, the answer is incorrect.  
Score: 0  
Accepted Answers:  
(a)  
(b)  
(c)  
(d)  

6) Fault diagnosis consist of

(a) Fault detection  
(b) Fault isolation  
(c) Fault identification  
(d) All of the above  

(a)  
(b)  
(c)  
(d)  

No, the answer is incorrect.  
Score: 0
7) Fault prognostics is used for
   a. Fault identification
   b. Remaining useful life prediction
   c. Fault isolation
   d. Fault detection

   No, the answer is incorrect.
   Score: 0
   Accepted Answers:
   (d)

8) For a failure mode with Occurrence ‘5’, Severity ‘2’, and Detection ‘1’, the RPN is
   a. 10
   b. 5
   c. 8
   d. 1

   No, the answer is incorrect.
   Score: 0
   Accepted Answers:
   (b)

9) The FMECA should be performed
   a. During machine operation
   b. Early in the design process
   c. After machine failure
   d. At any time

   No, the answer is incorrect.
   Score: 0
   Accepted Answers:
   (b)

10)
Following is (are) the element(s) of prognostics health management cycle

- a. Sensors
- b. Fault classification
- c. Prediction of fault evolution
- d. All of the above

No, the answer is incorrect.
Score: 0
Accepted Answers: (d)

11) Which one is not a type of supervised learning?

- a. Regression
- b. Clustering
- c. Support vector machine
- d. k-Nearest Neighbor

No, the answer is incorrect.
Score: 0
Accepted Answers: (b)

12) In artificial neural network (ANN) technique, multi-type signals can be used at a time for prediction

- a. True
- b. False

No, the answer is incorrect.
Score: 0
Accepted Answers: (a)

13) Select the type(s) of FMECA

- a. Design FMECA
- b. Process FMECA
- c. System FMECA
- d. All of the above

No, the answer is incorrect.
Score: 0
14) What are the objectives of FMECA?

a. Identification of potential failure
b. Evaluation of severity of failures
c. Both a. and b.
d. None of the above

(b) (c) (d)

No, the answer is incorrect.
Score: 0
Accepted Answers:
(d)

15) The useful period is also known as

a. Uptime
b. Down time
c. Breakdown time
d. Total time

(b) (c) (d)

No, the answer is incorrect.
Score: 0
Accepted Answers:
(c) (d)