Roll No										

PRESIDENCY UNIVERSITY
BENGALURU

SCHOOL OF ENGINEERING
MID TERM EXAMINATION - APR 2023

Semester : Semester VI - B.Tech MEC - 2020
Course Code : MEC3015
Course Name : Sem IV - MEC3015 - Reliability Engineering
Program : MEC

Date : 15-APR-2023
Time : 9:30AM - 11:00AM
Max Marks : 50
Weightage : 25%

Instructions:
(i) Read all questions carefully and answer accordingly.
(ii) Question paper consists of 3 parts.
(iii) Scientific and non-programmable calculator are permitted.
(iv) Do not write any information on the question paper other than Roll Number.

PART A

ANSWER ALL THE FIVE QUESTIONS **5 X 2=10M**

1. What are the causes of poor Maintenance?

(CO1) [Knowledge]

2. Define Condition Based Monitoring

(CO1) [Knowledge]

3. Define Total Productive Maintenance

(CO1) [Knowledge]

4. Define Mean Time To Failure

(CO2) [Knowledge]

5. Define Reliability

(CO2) [Knowledge]

PART B

ANSWER ALL THE TWO QUESTIONS **2 X 10 = 20M**

6. After Implementation of Computers in Maintenance activities for an Industry what are the benefits of computerization in Maintenance?

(CO1) [Comprehension]

7. Differenciate the Scheduled Downtime & Un-Scheduled Downtime with examples

(CO2) [Comprehension]

PART C

ANSWER THE FOLLOWING QUESTION **1 X 20 = 20M**

8.a) How the implementation of Total Productive Maintenance & Total Quality Maintenance are helpful to the Industries? Explain with an example (CO1) [APPLICATION]

b) Consider a series of tests conducted under certain stipulated conditions on 700 electronic components. The total duration of the tests is 5 hours. The number of components that fail during each hourly interval is noted. The results obtained are tabulated as shown in below table.

Time	1	2	3	4	5
Number of Failures	176	156	137	121	110

Calculate 1) Failure Density, 2) Failure Rate 3) Reliability & 4) Probability of Failure (CO2) [APPLICATION]