

Indian Statistical Institute, Bangalore
M.S. (QMS) First Year
Second Semester - Reliability, Maintainability and Safety-II
Final Exam

Time: 3 hours

Date: 14/07/2021

Maximum Marks: 50

1. Time between failures in operating hours of air conditioning equipment are:

413, 14, 58, 37, 100, 65, 9, 169, 447, 184, 36, 201, 118, 34.

Prepare plot of average ROCOF against time and offer your comments.

(10)

2. Explain the difference between HPP and NHPP models in repairable system reliability modeling.

(10)

3. Assuming exponential distribution, estimate the reliability function for the following data.

Unit No.	t_i	Failed / Censored
1	3	F
2	10	F
3	24	C
4	28	F
5	42	F
6	98	F
7	108	C

where t_i represent the time to failure or censoring.

(10)

4. Write short note on the following

- (a) FMEA
- (b) Availability
- (c) Accelerated life testing
- (d) Different types of warranty schemes

(4 x 5 = 20)