



**5KVA(1:1) => Model -HP1005 Online UPS System MTBF-MTTR- AVAILABILITY & AFR**

|             |   |                        |                                  |
|-------------|---|------------------------|----------------------------------|
| <b>MTBF</b> | = | Hours in a Year<br>AFR | <b>Mean Time Between failure</b> |
|-------------|---|------------------------|----------------------------------|

Failures are defined as critical load drops caused by anything, including human error.

During the sample period, Sixty failures were reported. So, based on the definition of failure established, 60 failures are used in the calculation that follows. The failed products were received, diagnosed, and repaired prior to the AFR calculation.

AFR is Calculated As

|            |   |   |  |
|------------|---|---|--|
| <b>AFR</b> | = | 60 failures X (52 weeks per year /26 weeks in sample) |  |
|            |   | 2000  |  |

|   |      |
|---|------|
| = | 60x2 |
|   | 2000 |

|   |      |
|---|------|
| = | 0.06 |
|---|------|

|             |   |      |              |
|-------------|---|------|--------------|
| <b>MTBF</b> | = | 8760 | <b>hours</b> |
|             |   | 0.06 |              |

|             |   |        |              |
|-------------|---|--------|--------------|
| <b>MTBF</b> | = | 146000 | <b>hours</b> |
|-------------|---|--------|--------------|

|             |   |           |              |
|-------------|---|-----------|--------------|
| <b>MTBF</b> | = | <b>17</b> | <b>Years</b> |
|-------------|---|-----------|--------------|

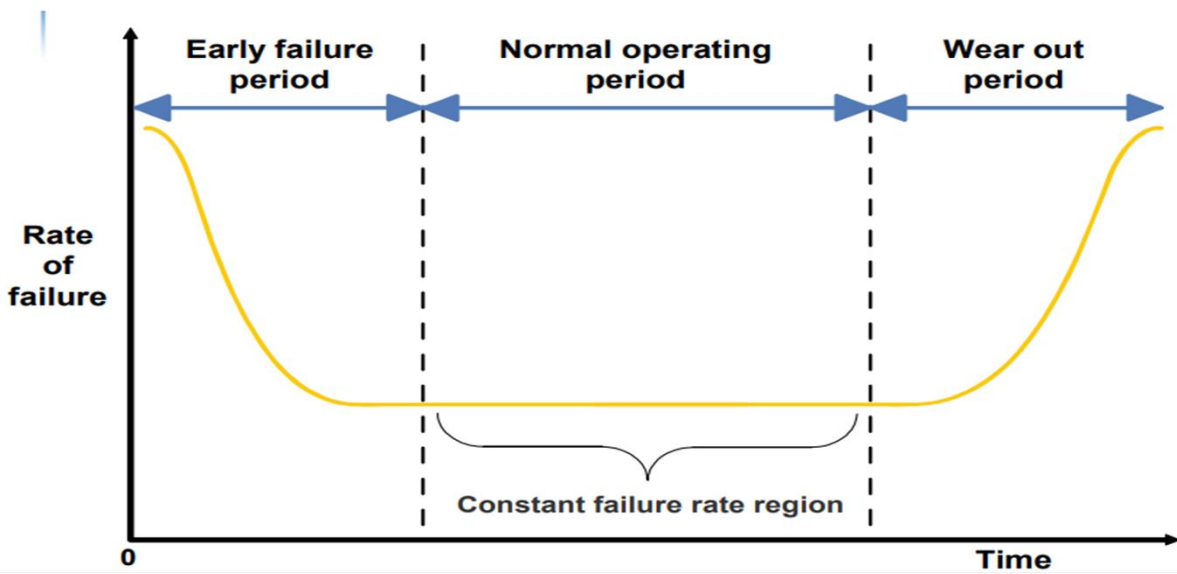
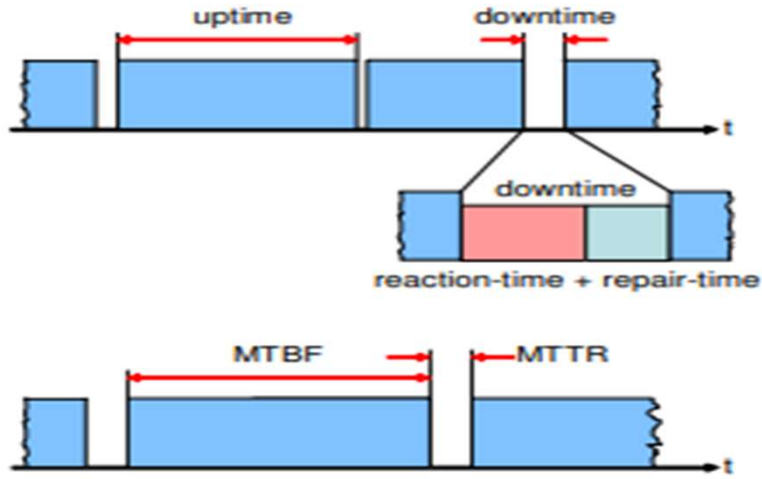
|             |   |                |
|-------------|---|----------------|
| <b>MTTR</b> | = | <b>4 hours</b> |
|-------------|---|----------------|

|                     |   |           |
|---------------------|---|-----------|
| <b>Availability</b> | = | MTBF      |
|                     |   | MTBF+MTTR |

|                     |   |          |
|---------------------|---|----------|
| <b>Availability</b> | = | 146000   |
|                     |   | 146000+4 |

|                     |   |        |
|---------------------|---|--------|
| <b>Availability</b> | = | 146000 |
|                     |   | 146004 |

|                     |   |             |
|---------------------|---|-------------|
| <b>Availability</b> | = | 0.999972603 |
|---------------------|---|-------------|



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