

**NPTEL course offered by IIT Madras**  
**Risk and Reliability of Offshore structures**  
**Tutorial 1: Introduction to Reliability**

**Answer all questions**

**Total marks: 25**

1. Identify two major challenges that are faced by designers of offshore platforms in the recent past
2. What uncertainties make the analysis and design of offshore structures complex?
3. What are the major advantages that Reliability methods possess?
4. List serious limitations possessed by Reliability methods
5. Define Risk and Reliability
6. Explain risk assessment
7. What are different types of uncertainties? Explain them in detail
8. List the rules of probability, which are useful for reliability analysis
9. Explain how plausible reasoning is useful in Reliability analysis
10. How safety, reliability and Risk are different?