NPTEL course offered by IIT Madras

Risk and Reliability of Offshore structures

<u>Tutorial 3: Random variables</u>

Answer all questions   **Total marks: 25**

1. **State and explain qualitative rules of plausible reasoning**

2. **What do you understand by Random variable?**

3. **List various methods of estimating parameters of probability distribution**

4. **If $P(A) = \frac{1}{2}, P(A \cap B) = \frac{3}{5}$ and $P(B) = p$**

   Find p if given that the events A and B are such that they are (i) mutually exclusive (ii) independent

5. **If A and B be independent events with P(A)=0.3 and P(B)=0.4 find the following:**

   (i)P(A∩B); (ii)P(A∪B); (iii)P(A|B); (iv)P(B|A)