

**NPTEL course offered by IIT Madras  
Computer methods of analysis of offshore structures**

**Tutorial 8: Environmental loads**

**Answer all questions**

**Total marks: 25**

1. Why behaviour of offshore platforms is complex under the action of environmental loads?
2. What do you understand by macro-scale and micro-scale variation in environmental loads?
3. Write a brief note on wave spectra
4. Write a brief note on wind loads on offshore structures
5. Write a brief note on Realization of wind forces on offshore structures
6. List and explain the factors that idealize dynamic characteristics of wind
7. Derive Aerodynamic admittance function, which is approximated to compute wind loads on offshore platforms
8. Write a brief note on wind spectra used in offshore structural design
9. Write brief note on ice loads
10. Write brief note on earthquake loads in offshore platforms