



## Discrete Structures

### SWAYAM Prabha Course Code - R2

<b>PROFESSOR'S NAME</b>	Prof. Manoj Prabhakaran
<b>DEPARTMENT</b>	Computer Science & Engineering
<b>INSTITUTE</b>	Indian Institute of Technology, Bombay
<b>COURSE OUTLINE</b>	Besides course outline, it should also indicate if there are any pre-requisites (i.e, prior knowledge) required .
	This course introduces various concepts in Discrete Mathematics that are relevant to the design and analysis of algorithms as well as other areas in computer science. The course covers basic concepts from Logic, Sets Relations and Functions, Number Theory, Graphs, Combinatorics, Recurrence Relations, the big-O notation and Countability.

#### COURSE DETAILS

S. No	Module ID/ Lecture ID	Lecture Title/Topic
1	R2-Mod1	Introduction to Mind Bending
2	R2-Mod2	Logic-Propositions, Predicates
3	R2-Mod3	Logic-Propositions, Predicates
4	R2-Mod4	Logic- Quantifier
5	R2-Mod5	Logic
6	R2-Mod6	Proofs: Logic in Action
7	R2-Mod7	Some Proof Template

8	<b>R2-Mod8</b>	Template for Ex P(x)
9	<b>R2-Mod9</b>	Mathematical Induction: Proof By Programming
10	<b>R2-Mod10</b>	Tromino Tiling
	<b>R2-Mod11</b>	Prime Factorization

**References if Any:**