CM1015 Computational Mathematics Reading List 2021 April

Textbooks used and abbreviation:

Foundation Maths. Croft, A. and R. Davison 6th (C), Number theory for computing. Yan, S.Y. 2nd (Y), Precalculus with limits. Larson, R. 4th (L), Mathematics for computer graphics. Vince 2nd (V), Linear Algebra step by step. Kuldeep Singh (K).

Week #	Topic	Chapter	Pages	Exercise
1	Number bases	Ch 14 (C)	P.154-164	SA&EX: 14.2, 14.3, 14.4, CH14
2				
3	Sequences and Series	Ch 12 (C)	P.126-140	SA&EX: 12.2, 12.3, 12.4, 12.6
4				
5	Modular arithmetic	Ch1.2.2 (Y) Ch1.6 (Y)	P. 21-27 P.111-127	N/A
6				
7	Angles, Triangles and Trigonometry	Ch 22 (C)	P.271-278	SA&EX: 22.1, EX: 22.2, TAE: 22.
8				
9	Graph Sketching and Kinematics	Ch 17 (C) Ch 1.1-1.8 (L)	P.189-210 P.2-83	SA&EX: 17.2, EX: 17.3 (3, 5-6) N/A
10				
11	Trigonometric functions	Ch 23 (C) Ch 24 (C)	P.279-291 P.292-304	SA&EX: 23.1, 23.2, CH: 23, TAE: 23. EX: 24.1 (1-3, 6, 12)
12				
13	Exponential and logarithmic functions	Ch 19 (C) Ch 20 (C)	P.224-232 P.233-250	EX: 19.1, SA&EX: 19.2. SA&EX: 20.1, EX: 20.2, 20.3 (1-3), 20.5.
14				
15	Calculus: limits and differentiation	Ch 34 (C) CH 35 (C) Ch 12 (L)	P.434-450 P.451-461 P.813-861	SA&EX: 34.2, 34.3, 34.4, EX: 34.5 (1-2, 4). SA&EX: 35.2, 35.3. 12.1 (5-10, 23, 41-42).
16				
17	Algebra: Vectors, Matrices and Linear Transformations	Ch 26 (C) Ch 7.2 (V)	P.322-336 P.53-56	SA&EX: 26.1, 26.3, 26.5, EX: 26.2. N/A
18		Ch 8.1-4 (L) Ch 1.1-1.2 (K) Ch 3.2.2 (K) Ch 27 (C)	P.537-581 P.1-26 P.208-210 P.337-351	N/A N/A N/A EX: 27.1, SA&EX: 27.2, 27.3, 27.4.
19	Combinatorics and Probability	Ch 30 (C) Ch 31 (C) Ch 9.6-9.7 (L)	P.388-402 P.403-411 P.652-673	EX: 30.2, 30.3. EX: 31.2, 31.3, 31.4. N/A
20				