3rd SEMESTER ISE E- Class Schedule

18MAT31 – Transform Calculus, Fourier Series And Numerical Techniques (Maths)

Modules	Topics [2hr each]	PPT	Video Links	E- Materials	Date[2 hours]
Module-1: **Laplace Transform**	L1: Introduction-Definition-Standard functions-Problems	https://drive.google.com/file/d/1SHop7gfaRF10NRMb3BO_pS2oakt3rH39/view?usp=sharing	**(PASSWORD: YITMATPSK)** https://www.loom.com/share/aa8af56f86444f5bac0dd2c42debc9e6 https://www.loom.com/share/999f8e76778b484a87afa7a2fcc078d1 https://www.loom.com/share/eb81e63a4a874e3e815d6d6a70bd705a	https://drive.google.com/file/d/1ArgQTJTETo3j9fkBkM6ypEnlAzbGnNvv/view?usp=sharing	01-09-2020 (P.Kamath)
	L2: Properties of LT-Property 1& 2-Problems	https://drive.google.com/file/d/1zfM8cal1t8fea5AyhrAy0qf3XXOuqm42/view?usp=sharing	https://www.loom.com/share/7813c668571d493e938a35eff966a3cb https://www.loom.com/share/6f5d3bce9d8b4cb593a187d01f294000	https://drive.google.com/file/d/1fqKIaPW-HWCCxY-4jpGAnenakEwPpSbk/view?usp=sharing	02-09-2020 (P.Kamath)
	L3: Properties of LT-Property 3-Problems	https://drive.google.com/file/d/1XA5UoQuIO4uHL8UmThqoXnjKFItZp6R6/view?usp=sharing	https://www.loom.com/share/b0dc25fe1efa49a487fe0d6ba16a6822 https://www.loom.com/share/2be6b68f3bbd4a3bb2	https://drive.google.com/file/d/1QWlj03_4mLpEl8hDZN1S5GvUPU3v36bo/view?usp=sharing	08-09-2020 (P.Kamath)

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	L4: LT of Periodic Functions-Problems	https://drive.google.com/file/d/13o2ZY7H3qW25_XSSLmyc_ZS5TMF7k2Ku/view?usp=sharing		https://drive.google.com/file/d/1hQk580dcTTZQO4wwIi7MER1LjgpyTqnW/view?usp=sharing	09-09-2020 (P.Kamath)
	L5: LT of Unit Step/Heaviside Functions-Problems	https://drive.google.com/file/d/1t-ddrmA9Dnkjcejm2MdVh9xNmpOBPkxC/view?usp=sharing		https://drive.google.com/file/d/1lg7cAEZbWGBUWQ1z2Q-MELQD0NOkGG-b/view?usp=sharing	15-09-2020 (P.Kamath)
	L6: LT of Unit Step/Heaviside Functions-Problems	https://drive.google.com/file/d/1CdUh7QIXruQFIWF0Z55tXUSBw4YfsZOA/view?usp=sharing		https://drive.google.com/file/d/1dK_c2LRZpoKIugj919Wn3_iGRFwYgybY/view?usp=sharing	16-09-2020 (P.Kamath)
	Inverse Laplace Transform and Problems on Properties	https://drive.google.com/file/d/1IcDJy4-YtCJ8b9X07DJ-y-v9LN6szcGj/view?usp=sharing		https://drive.google.com/file/d/17eDYSNfkSDLgQzrP_No6w1cVC9SCeibC/view?usp=sharing	22/09/2020 (shivani)
	Problems on Inverse LT	https://drive.google.com/file/d/1pGOLl92agtOynltoxHnHbHZiNaGtqBoA/view?usp=sharing		https://drive.google.com/file/d/1jWm-oQ9swklFtCknHHuu2pBcJAMEx7pO/view?usp=sharing	23/09/2020 (shivani)
	Inverse LT- Convolution Theorem	https://drive.google.com/file/d/18SQlKWmyrcWXBSS3qD3NpHAPAVjtrqws/view?usp=sharing		https://drive.google.com/file/d/1zpJ5nRJ_fkh-JR_uZAJ6Usr4Ztg5GSBh/view?usp=sharing	29/09/2020
	Convolution Theroem- Problems	https://drive.google.co		https://drive.google.com/file/d/1_4w	30/09/2020

		m/file/d/16Em75kJxJvRD7Kl0GLsLiKtB9oiuj7QG/view?usp=sharing		HN2flaSOH7caWpKi-loZV_qwVL38B/view?usp=sharing	
	Application of Laplace Transform	https://drive.google.com/file/d/1AGxR5PpHlFq6BRRtTEYw2v6bXaNmODWt/view?usp=sharing		https://drive.google.com/file/d/1slx1Wl66rkmrIp9p6mozwkd30y_uP-rT/view?usp=sharing	06/10/2020
	Application of Laplace Transform	https://drive.google.com/file/d/17QVqFDGFzKZbWVVM0f0H_nxD_oUFIC6C/view?usp=sharing		https://drive.google.com/file/d/1jzt2Pw15-Ee6xOI5I-b6MyVU8TlMmlnX/view?usp=sharing	7/10/2020
Assignment: Objective question will be given at the end of the module **Model question are share at the end of the module** **Basic Formula Sheet - https://drive.google.com/file/d/1YFO2zNKQw23JmRHFEg7aHez0L_LWsAuj/view?usp=sharing** **Question Bank (Module 1) - https://drive.google.com/file/d/1qdDXv3swqhoHMYgDpzL7PP2Viddq5mg-/view?usp=sharing**					
Module-2	**Topics [1hr each]**	**PPT**	**Video Links**	**E- Materials**	**Date[2 hours]**
Assignment: Objective question will be given at the end of the module **Model question are share at the end of the module**					
Module-3	**Topics [1hr each]**	**PPT**	**Video Links**	**E- Materials**	**Date[2 hours]**
Assignment: Objective question will be given at the end of the module **Model question are share at the end of the module**					
Module-4	**Topics [1hr each]**	**PPT**	**Video Links**	**E- Materials**	**Date[2 hours]**
Numerical Methods for ODEs	**L13: Introduction - Taylor's Series method**	https://drive.google.com/file/d/1z3AE7hZOcY6qQfaGOde1wTaduW9XvUqv/view?usp=sharing		https://drive.google.com/file/d/1fXoBktrvDP7ZCtWZ08e1KqmahtuCd1kt/view?usp=sharing	**13/10/2020 (P. Kamath)**
	L14: Modified Euler's method.	https://drive.google.com/file/d/1yYfr-42TRogJesbWDsrU2		https://drive.google.com/file/d/1TNNsG70ihN3Jot577j-T_K3lYjRqYFwS/view?usp=sharing	**14/10/2020 (P. Kamath)**

		KkZq8GmWWEG/view?usp=sharing			
	L15: Runge-Kutta method of fourth order	https://drive.google.com/file/d/1c76BvvaebH49cKA3HQR056Qf1tmTUIBe/view?usp=sharing		https://drive.google.com/file/d/1O4BwQPCR7dezsEHVARxmiwcNf1xsA0LF/view?usp=sharing	**20/10/2020 (P. Kamath)**
	L16: Milne's predictor-corrector method	https://drive.google.com/file/d/1wfK-uoKqIMhXNu6hGAUy3GGHBC5j1oTf/view?usp=sharing		https://drive.google.com/file/d/1hnKM2LUShF22AfY7ZgZmpnAG3k7pR-Wm/view?usp=sharing	**21/10/2020 (P. Kamath)**
	L17: Adam-Bashforth's predictor-corrector method	https://drive.google.com/file/d/1aouDkTEo3dhjinzyec_v5NhY1YYEhM_C/view?usp=sharing		https://drive.google.com/file/d/1QuX2F-aioMWnMxq1_yvSC1NN4CG9UQWs/view?usp=sharing	**27/10/2020 (P. Kamath)**
Assignment: Objective question will be given at the end of the module Model question are share at the end of the module					
Module-5	**Topics [1hr each]**	**PPT**	**Video Links**	**E- Materials**	**Date[2 hours]**
Numerical Methods for second order ODEs	**L18: Runke Kutta Method**	https://drive.google.com/file/d/1I_DEOL37auJsqMxVSjS3vZKXKm94J5Uz/view?usp=sharing		https://drive.google.com/file/d/1dzJ1A3oHyA_FVPr4U2ak1HEl1ykSyLfK/view?usp=sharing	**28/10/2020 (shivani)**
	L19: Milne's Predictor-Corrector formula	https://drive.google.com/file/d/1I_DEOL37auJsqMxVSjS3vZKXKm94J5Uz/view?usp=sharing		https://drive.google.com/file/d/1dzJ1A3oHyA_FVPr4U2ak1HEl1ykSyLfK/view?usp=sharingc	**03/11/2020 (shivani)**
	L20:Milne's Predictor-Corrector	https://drive.googl		ttps://drive.google.com/file/d/1dzJ1	**04/11/2020**

	formula	e.com/file/d/1I_DEOL37auJsqMxVSjS3vZKXKm94J5Uz/view?usp=sharing		A3oHyA_FVPr4U2ak1HEl1ykSyLfK/view?usp=sharingc	**(shivani)**
Calculus of Variations	**L 21: Euler's Equation Derivation**	**https://drive.google.com/file/d/1yi38mttAnTEYzuZYpJ-RdlbqFMMAgYI-/view?usp=sharing**		**https://drive.google.com/file/d/1a_BP56DXahxNdSRbFwX04CKY0ZLqRbyD/view?usp=sharing**	**10/11/2020 (Seethalakshmi)**
	L 22: Variational Problems	**https://drive.google.com/file/d/1kjVJQq7krJi2MveH1sgiVAFhTPJP_nc5/view?usp=sharing**		**https://drive.google.com/file/d/1ukBM9iBzO-BpX07nbLd_ibx7p6rfvA2J/view?usp=sharing**	**11/11/2020 (Seethalakshmi)**
	L 23: Variational Problems	**https://drive.google.com/file/d/1kjVJQq7krJi2MveH1sgiVAFhTPJP_nc5/view?usp=sharing**		**https://drive.google.com/file/d/1ukBM9iBzO-BpX07nbLd_ibx7p6rfvA2J/view?usp=sharing**	**17/11/2020 (Seethalakshmi)**
	L 24: Applaications	**https://drive.google.com/file/d/1QUYJpaDdsyy6MJeSffMJMtN8V61hwGTc/view?usp=sharing**		**https://drive.google.com/file/d/167uqTANMSkX4aSQ3tnx72jZr5ZRuNTTz/view?usp=sharing**	**18/11/2020 (Seethalakshmi)**
Assignment: Objective question will be given at the end of the module **Model question are share at the end of the module**					

18CS32 – Data Structures and Applications (DS)					
Modules	**Topics [1hr each]**	**PPT**	**Video Links**	**E- Materials**	**Date[2 hours]**
Module-1: Introduction	Data Structures, Classifications (Primitive & Non Primitive), Data structure Operations	Will be shared in google classroom	https://www.youtube.com/watch?v=DFpWCl_49i0	https://drive.google.com/open?id=1YaC2E10XoEQ2eRaa3WT_CxqCVSRZyB1S&authuser=1 https://www.includehelp.com/data-structure-tutorial/data-structure-types-and-operations-associated-with-them.aspx https://www.tutorialscan.com/data_structure/classification-of-data-structure/	01/09/2020
	Review of Arrays, Structures, Self-Referential Structures		https://www.youtube.com/watch?v=otu7gJVcwDw	https://drive.google.com/open?id=1YaC2E10XoEQ2eRaa3WT_CxqCVSRZyB1S&authuser=1 https://cse.iitkgp.ac.in/~palash/Courses/2020PDS/Files/L9-LinkedList.pdf https://www.geeksforgeeks.org/self-referential-structures/	04/09/2020
	Unions, Pointers.		https://www.youtube.com/watch?v=d_XvFOkQz5k	https://drive.google.com/open?id=1YaC2E10XoEQ2eRaa3WT_CxqCVSRZyB1S&authuser=1 https://www.tutorialspoint.com/cprogramming/c_unions.htm	04/09/2020

				https://www.tutorialspoint.com/cprogramming/c_pointers.htm	
	Dynamic Memory Allocation Functions. Representation of Linear Arrays in Memory, Dynamically allocated arrays.		https://www.youtube.com/watch?v=v49bwqQ4ouM	https://drive.google.com/open?id=1YaC2E10XoEQ2eRaa3WT_CxqCVSRZyB1S&authuser=1 https://www.guru99.com/c-dynamic-memory-allocation.html https://www.studytonight.com/c/dynamic-memory-allocation-in-c.php	08/09/2020
	Array Operations: Traversing, inserting.		https://www.youtube.com/watch?v=KELqVT7hjeE https://www.youtube.com/watch?v=D0C7p_Offsw	https://drive.google.com/open?id=1YaC2E10XoEQ2eRaa3WT_CxqCVSRZyB1S&authuser=1 https://tutorialink.com/ds/traverse-operation.ds https://www.tutorialspoint.com/data_structures_algorithms/array_data_structure.htm	11/09/2020
	Deleting, searching, and sorting.		https://www.youtube.com/watch?v=CZYR2v8rYLA https://www.youtube.com/watch?v=8AMg8oToIdc	https://drive.google.com/open?id=1YaC2E10XoEQ2eRaa3WT_CxqCVSRZyB1S&authuser=1 https://www.tutorialspoint.com/data_structures_algorithms/array_data_structure.htm	11/09/2020
	Multidimensional Arrays, Polynomials.		https://www.youtube.com/watch?v=ERheR_z24Bo	https://drive.google.com/open?id=1YaC2E10XoEQ2eRaa3WT_CxqCVSRZyB1S&authuser	15/09/2020

				=1 https://profiles.uonbi.ac.ke/christopherchepken/files/lecture_4-arrays.pdf	
	Sparse Matrices.		https://www.youtube.com/watch?v=IBRdc_XEh_U https://www.youtube.com/watch?v=V3TAtTtC4Xs	https://drive.google.com/open?id=1YaC2E10XoEQ2eRaa3WT_CxqCVSRZyB1S&authuser=1 http://www.btechsmartclass.com/data_structures/sparse-matrix.html http://www.cprogrammingnotes.com/question/sparse-matrix.html	15/09/2020
	Strings: Basic Terminology, Storing.		https://www.youtube.com/watch?v=AefKSoNpZtQ	https://drive.google.com/open?id=1YaC2E10XoEQ2eRaa3WT_CxqCVSRZyB1S&authuser=1 https://www.tutorialspoint.com/cprogramming/c_strings.htm https://www.geeksforgeeks.org/storage-for-strings-in-c/	18/09/2020
	Operations and Pattern Matching algorithms, Programming Examples.		https://www.youtube.com/watch?v=yMJLpdKV0BQ	https://drive.google.com/open?id=1YaC2E10XoEQ2eRaa3WT_CxqCVSRZyB1S&authuser=1 https://www.tutorialspoint.com/cprogramming/c_strings.htm https://www.programmingsimplified.com/c/source-code/c-	22/09/2020

				program-for-pattern-matching	
Assignment: Objective question will be given at the end of the module **Model question are share at the end of the module**					
Modules-2	**Topics [1hr each]**	**PPT**	**Video Links**	**E- Materials**	**Date[2 hours]**
Stack, Recursion, Queues	Definition, Stack Operations, Array Representation of Stacks	Will be shared in google classroom	https://www.youtube.com/watch?v=sFVxsglODoo	https://aits-tpt.edu.in/wp-content/uploads/2018/08/DS-unit-2.1.pdf	25/9/2020
	Stacks using Dynamic Arrays, Stack Applications: Polish notation		https://www.youtube.com/watch?v=fDTrZzQIcXM	https://aits-tpt.edu.in/wp-content/uploads/2018/08/DS-unit-2.1.pdf	29/9/2020
	Infix to postfix conversion		https://www.youtube.com/watch?v=vXPL6UavUeA	https://www.tutorialspoint.com/Convert-Infix-to-Postfix-Expression	06/10/2020
	Evaluation of postfix expression.		https://www.youtube.com/watch?v=_TGyjXjg04w&feature=emb_logo https://www.youtube.com/watch?v=QCnANUfgC-w	https://www.tutorialspoint.com/Evaluate-Postfix-Expression	09/10/2020
	Recursion -Factorial, GCD, Fibonacci Sequence		https://www.youtube.com/watch?v=B0NtAFf4bvU	https://www.geeksforgeeks.org/c-program-for-fibonacci-numbers/	12/10/2020
	Tower of Hanoi, Ackerman's function		https://www.youtube.com/watch?v=YstLjLCGmgg&feature=emb_logo https://www.youtube.com/watch?v=TYHY4wJS7ks	https://www.tutorialspoint.com/data_structures_algorithms/tower_of_hanoi.htm https://www.geeksforgeeks.org/ackermann-function/	16/10/2020
	Queues: Definition, Array Representation, Queue Operations		https://www.youtube.com/watch?v=gnYM_G1ILm0 https://www.youtube.com/watch?v=RHtjKNDdeC0	https://www.tutorialspoint.com/data_structures_algorithms/dsa_queue.htm	19/10/2020
	Circular Queues, Circular queues using Dynamic arrays		https://www.youtube.com/watch?v=YKZDgEueWbI https://www.youtube.com/watch?v=eKxWdc1DVFE&feature=emb_logo	https://www.tutorialspoint.com/data_structures_algorithms/dsa_queue.htm	19/10/2020
	Dequeues, Priority Queues, A Mazing Problem		https://www.youtube.com/watch?v=wIKd3y4kDqk	https://www.geeksforgeeks.org/priority-queue-set-1-introduction/	23/10/2020
	Multiple Stacks and Queues. Programming Examples.		https://www.youtube.com/watch?v=W9F8fDQj7Ok	https://www.tutorialspoint.com/data_structures_algorithms/stack_algorithm.htm	27/10/2020

	Multiple Stacks and Queues. Programming Examples.		https://www.youtube.com/watch?v=o3auMFN2_QQ	https://www.tutorialspoint.com/data_structures_algorithms/stack_algorithm.htm	03/11/2020
Assignment: Objective question will be given at the end of the module **Model question are share at the end of the module**					
Modules-3	**Topics [1hr each]**	**PPT**	**Video Links**	**E- Materials**	**Date[2 hours]**
Linked Lists	Definition, Representation of linked lists in Memory.	Will be shared in google classroom	https://www.youtube.com/watch?v=ge8iG7JecR4&feature=emb_logo	https://www.faceprep.in/data-structures/linked-list-introduction/#:~:text=A%20linked%20list%20is%20a,end%20of%20the%20linked%20list.	06/11/2020
	Memory allocation, Garbage Collection.		https://www.geeksforgeeks.org/linked-list-set-1-introduction	http://www.xpode.com/ShowArticle.aspx?Articleid=292	06/11/2020
	Linked list operations: Traversing		https://www.youtube.com/watch?v=IKrNp3yqZh8&list=PLWPirh4EWFpG49yASGCmvOwXwVvgnm6Jt&index=52	https://www.programiz.com/dsa/linked-list-operations	10/11/2020
	Searching, Insertion, and Deletion.		https://www.youtube.com/watch?v=CxOtQ11_qPM	https://www.tutorialspoint.com/data_structures_algorithms/linked_list_algorithms.htm	10/11/2020
	Doubly Linked lists, Circular linked lists		https://www.tutorialspoint.com/data_structures_algorithms/doubly_linked_list_algorithm.htm https://www.tutorialspoint.com/data_structures_algorithms/circular_linked_list_algorithm.htm	https://www.youtube.com/watch?v=VOQNf1VxU3Q https://www.youtube.com/watch?v=vUcfB8ScrBY	13/11/2020
	Header linked lists.		https://www.youtube.com/watch?v=_i0spiTbCZQ https://www.youtube.com/watch?v=7t0LvgjJUdU	https://www.tutorialspoint.com/data_structures_algorithms/linked_lists_algorithm.htm	13/11/2020
	Linked Stacks and Queues.		https://www.geeksforgeeks.org/queue-linked-list-implementation/ https://www.youtube.com/watch?v=OkkMub7pPBI	https://www.tutorialspoint.com/data_structures_algorithms/dsa_queue.htm https://www.tutorialspoint.com/data_structures_algorithms/stack_algorithm.htm	17/11/2020
	Applications of Linked lists – Polynomials,		https://www.youtube.com/watch?v=QaWkT-ZUwxA	https://www.tutorialspoint.com/data_structures_algorithms/linked_lists_algorithm.htm	17/11/2020
	Sparse matrix representation.		https://www.youtube.com/watch?v=PK8CKekErJ4	https://www.tutorialspoint.com/sparse-matrices-in-data-structure	20/11/2020
	Programming Examples		https://www.youtube.com/wat	https://www.tutorialspoint.com/learn_c	20/11/2020

			ch?v=eGnlKPCkAFY	_by_examples/linked_list_programs_in_c.htm	
Assignment: Objective question will be given at the end of the module **Model question are share at the end of the module**					
Modules-4	**Topics [1hr each]**	**PPT**	**Video Links**	**E- Materials**	**Date[2 hours]**
Trees	Terminology, Binary Trees, Properties of Binary trees	Will be shared in google classroom	https://www.youtube.com/watch?v=VSeqNO7HR34	https://www.tutorialspoint.com/data_structures_algorithms/tree_data_structure.htm#:~:text=A%20binary%20tree%20has%20a,fast%20as%20in%20linked%20list.	24/11/2020
	Array and linked Representation of Binary Trees		https://www.youtube.com/watch?v=WF8eKTw13-s	https://www.tutorialspoint.com/data_structures_algorithms/tree_data_structure.htm	24/11/2020
	Binary Tree Traversals - Inorder, postorder, preorder;		https://www.youtube.com/watch?v=OrhgXVwbSPY	https://www.tutorialspoint.com/binary-tree-traversals-in-data-structures	27/11/2020
	Additional Binary tree operations.		https://www.youtube.com/watch?v=JgBE3F4fWfM	https://www.tutorialspoint.com/binary-tree-adt-in-data-structure	27/11/2020
	Threaded binary trees		https://www.youtube.com/watch?v=ffgg_zmbaxw	https://www.tutorialspoint.com/threaded-binary-trees-in-data-structure	01/12/2020
	Binary Search Trees – Definition		https://www.youtube.com/watch?v=QXPzmKcfmcM	https://www.tutorialspoint.com/data_structures_algorithms/binary_search_tree.htm#:~:text=A%20Binary%20Search%20Tree%20(BST,parent%20(root)%20node's%20key.	01/12/2020
	Insertion, Deletion		https://www.youtube.com/watch?v=fYMDkdDViHw https://www.youtube.com/watch?v=nyM7RpnM39I	https://www.tutorialspoint.com/binary-search-tree-search-and-insertion-operations-in-cplusplus https://www.tutorialspoint.com/binary-search-tree-delete-operation-in-cplusplus	01/12/2020
	Traversal, Searching		https://www.youtube.com/watch?v=OrhgXVwbSPY	https://www.tutorialspoint.com/data_structures_algorithms/tree_traversal.htm https://www.tutorialspoint.com/data_structures_algorithms/binary_search_algorithm.htm	04/12/2020
	Application of Trees-Evaluation of Expression		https://www.geeksforgeeks.org/evaluation-of-expression-tree/	https://tutorialspoint.dev/data-structure/binary-tree-data-structure/evaluation-of-expression-tree	04/12/2020
	Programming Examples		https://www.youtube.com/watch?v=KdbFmwRvkvg	https://www.tutorialspoint.com/data_structures_algorithms/tree_data_structure.htm	04/12/2020
Assignment: Objective question will be given at the end of the module **Model question are share at the end of the module**					

Modules-5	Topics [1hr each]	PPT	Video Links	E- Materials	Date[2 hours]
Graphs, Sorting and Searching, Files and Their Organization	Definitions, Terminologies, Matrix and Adjacency List Representation Of Graphs,	Will be shared in google classroom	https://www.geeksforgeeks.org/graph-and-its-representations/	https://www.tutorialspoint.com/data_structures_algorithms/graph_data_structure.htm	08/12/2020
	Elementary Graph operations		https://www.youtube.com/watch?v=RlHt1ioLOto	https://www.tutorialspoint.com/data_structures_algorithms/graph_data_structure.htm	08/12/2020
	Traversal methods: Breadth First Search and Depth First Search.		https://www.youtube.com/watch?v=9LP87hwO_4g https://www.youtube.com/watch?v=T90KYy7MHY4	https://www.tutorialspoint.com/data_structures_algorithms/breadth_first_traversal.htm#:~:text=Breadth%20First%20Search%20(BFS)%20algorithm,and%20G%20lastly%20to%20D. https://www.tutorialspoint.com/data_structures_algorithms/breadth_first_traversal.htm	11/12/2020
	Insertion Sort, Radix sort		https://www.youtube.com/watch?v=cKjI8L_xld4 https://www.youtube.com/watch?v=HOPwlxCl64o	https://www.tutorialspoint.com/data_structures_algorithms/insertion_sort_algorithm.htm	11/12/2020
	Address Calculation Sort.		https://www.youtube.com/watch?v=HFCZRqHGJs8	https://tutorialspoint.dev/language/python/address-calculation-sort-using-hashing	15/12/2020
	Hash Table organizations, Hashing Functions		https://www.youtube.com/watch?v=SWG9uoYUvSc https://www.youtube.com/watch?v=IEy8CzeUaRg	https://www.tutorialspoint.com/data_structures_algorithms/hash_data_structure.htm	15/12/2020
	Static and Dynamic Hashing		https://www.youtube.com/watch?v=19k4_cJA2Wo https://www.youtube.com/watch?v=py67a1zJAew	https://www.tutorialspoint.com/dbms/pdf/dbms_hashing.pdf	18/12/2020
	Data Hierarchy, File Attributes		https://searchstorage.techtarget.com/definition/file-system	https://www.tutorialspoint.com/data_structures_algorithms/data_structure_overview.htm	18/12/2020
	Text Files and Binary Files, Basic File Operations		https://www.youtube.com/watch?v=8fkbJ9F4ntk	https://www.tutorialspoint.com/operating_system/os_file_system.htm	22/12/2020
	File Organizations and Indexing		https://www.youtube.com/watch?v=lyTPtoBfs9I	https://www.tutorialspoint.com/dbms/dbms_indexing.htm	22/12/2020
Assignment: Objective question will be given at the end of the module **Model question are share at the end of the module**					

18CS33 – Analog and Digital Electronics (ADE)					
Modules	**Topics [1hr each]**	**PPT**	**Video Links**	**E- Materials**	**Date[2 hours]**
Module-1:	Semiconductor Diodes and Applications	https://www.slideserve.com/habib/diodes-and-their-applications	https://www.youtube.com/watch?v=872tg-mFepI	http://eon.sdsu.edu/~johnston/ME204/Lecture_Notes/Diodes%20and%20Rectifiers.pdf	5/9/2020
	BJT biasing	https://www.slideshare.net/AnisurRahmanNayem/transistor-biasing-69604669	https://slideplayer.com/slide/6114079/	http://www.bu.edu.eg/portal/uploads/Engineering,%20Shoubra/Electrical%20Engineering/2461/crs-11966/Files/ECE312_lec03.pdf	7/9/2020
	operational amplifier and its applivcations	https://www.youtube.com/watch?v=dgg6cIf4LTE	https://www.elprocus.com/operational-amplifiers/	https://www.electronics-tutorials.ws/opamp/opamp_1.html	14/9/2020
	operational amplifier and its applivcations	https://www.youtube.com/watch?v=dgg6cIf4LTE	https://www.elprocus.com/operational-amplifiers/	https://www.electronics-tutorials.ws/opamp/opamp_1.html	14/9/2020
	Problems on multivibrators	-	-	-	21/9/2020
	Problems on amplifiers	-	-	-	21/9/2020
	Active Filters	https://www.slideshare.net/SATHEESHMONIKANDAN/7active-filters-using-opamp	https://www.youtube.com/watch?v=gEeF8sEQTEc	http://sites.bu.edu/engcourses/files/2016/08/ActiveFilterNotes.pdf	28/9/2020
	Voltage regulators	https://www.slideshare.net/niiraz/voltage-regulator-29002693	https://www.youtube.com/watch?v=rPb0p7N1O00	https://feng.stafpu.bu.edu.eg/Electrical%20Engineering/2461/crs-12135/Files/ECE322_ElecCtB_lec07.pdf	3/10/2020
	D/A converter & A/D Converter	http://ume.gatech.edu/mechatronics_course/DAC_F06.ppt	https://www.youtube.com/watch?v=PoOm_G4s1dE	http://www.idc-online.com/technical_references/pdfs/electronic_engineering/Dac_And_Binary_Weighted_Resistor_Dac.pdf	5/10/2020

Assignment: Objective question will be given at the end of the module **Model question are share at the end of the module**					
	Topics [1hr each]	**PPT**	**Video Links**	**E- Materials**	**Date[2 hours]**
Modules-2	Minimum forms of switchng functions				**10/102020**
	2 & 3 variable K map		**https://www.youtube.com/watch?v=EznCqZ1eh5Q**		**12/10/2020**
	4 variable K map		**https://www.youtube.com/watch?v=FT03XrQ8Bi4**		**17/10/2020**
	Essential prime implicaNTS				**19/10/2020**
	QUINE MC CLUSKEY METHOD		**https://www.youtube.com/watch?v=l1jgq0R5EwQ**		**24/10/2020**
	PRIME IMPLICANT CHART			**https://nptel.ac.in/content/storage2/courses/106103116/handout/mod3.pdf**	**26/10/2020**
	Petricks method		**https://www.youtube.com/watch?v=97KpndF8-So**		**31/10/2020**
	Incompletely Specified Function	**https://slideplayer.com/slide/12741847/**			**2/11/2020**
	Problems				**7/11/2020**
	Map entered variable		**https://www.youtube.com/watch?v=Zx1CnnIg7_k**		**9/11/2020**
Assignment: Objective question will be given at the end of the module **Model question are share at the end of the module**					
	Topics [1hr each]	**PPT**	**Video Links**	**E- Materials**	**Date[2 hours]**
Modules-3	**Combinational circuit design and simulation using gates,Gate delays and Timing diagrams, Hazards in combinational Logic, simulation and testing of logic circuits**	Will be shared in google classroom	**https://www.youtube.com/watch?v=Pjw8t-bGSBo**	**https://www.electronics-tutorials.ws/combination/comb_1.html https://www.allaboutcircuits.com/technical-articles/hazards-in-combinational-logic/**	**21/11/2020**
	Multiplexers, Decoders ,and Programmable Logic Devices: Multiplexers		**https://www.youtube.com/watch?v=QzBv7LEeap8**	**https://www.geeksforgeeks.org/difference-between-multiplexer-and-decoder/**	**23/11/2020**

	three state buffers, decoders and encoders,Programmable Logic devices		https://www.youtube.com/watch?v=PpooseaAAqs	https://www.tutorialspoint.com/digital_circuits/digital_circuits_encoders.htm	28/11/2020
	Programmable Logic Arrays, Programmable Array Logic.		https://www.youtube.com/watch?v=jrQ1YYgiOTo	https://www.tutorialspoint.com/digital_circuits/digital_circuits_programmable_logic_devices.htm	30/11/2020
Assignment: Objective question will be given at the end of the module **Model question are share at the end of the module**					
Modules-4	Topics [1hr each]	PPT	Video Links	E- Materials	Date[2 hours]
	Introduction to VHDL: VHDL description of combinational circuits,VHDL Models for multiplexers, VHDL Modules.	Will be shared in google classroom	https://www.youtube.com/watch?v=zm-RA6BsYmc	https://www.javatpoint.com/vhdl	5/12/2020
	Latches and Flip-Flops: Set Reset Latch,Gated Latches, Edge-Triggered D Flip Flop 3		https://www.youtube.com/watch?v=Hi7rK0hZnfc	https://www.tutorialspoint.com/digital_circuits/digital_circuits_flip_flops.htm	7/12/2020
	SR Flip Flop,J K Flip Flop, T Flip Flop, Flip Flop with additional inputs, Asynchronous Sequential Circuits		https://www.youtube.com/watch?v=Hi7rK0hZnfc	https://www.tutorialspoint.com/digital_circuits/digital_circuits_flip_flops.htm	12/12/2020
Assignment: Objective question will be given at the end of the module **Model question are share at the end of the module**					
Modules-5	Topics [1hr each]	PPT	Video Links	E- Materials	Date[2 hours]
	Registers and Counters: Registers and Register Transfers	Will be shared in google classroom	https://www.youtube.com/watch?v=8JMfp-y335s&list=PLF5d-6UzZxoP8WoZcVzczWIa07HVZyRA-&index=47	http://people.sabanciuniv.edu/erkays/cs303/ch06.pdf	14/12/2020
	Parallel Adder with accumulator, shift registers,		https://www.youtube.com/watch?v=9YWrwEIULj8	https://www.geeksforgeeks.org/parallel-adder-and-parallel-subtractor/	19/12/2020
	design of Binary counters		https://www.youtube.com/watch?v=lj-QGx-Wyw4	https://en.wikipedia.org/wiki/Counter_(digital)	21/12/2020
	counters for other sequences, counter design using SR and J K Flip Flops,		https://www.youtube.com/watch?v=wyFSjAMdIvQ	https://www.electronics-tutorials.ws/sequential/seq_2.html	26/12/2020

	sequential parity checker, state tables and graphs		**https://slideplayer.com/slide/4625468/**	**https://ece.uwaterloo.ca/~cgebotys/NEW/223-9notes.htm**	**28/12/2020**
Assignment: Objective question will be given at the end of the module **Model question are share at the end of the module**					

18CS34 – Computer Organization (CO)					
Modules	**Topics [1hr each]**	**PPT**	**Video Links**	**E- Materials**	**Date[2 hours]**
Module-1: **Basic Structure of Computers**	**Lecture 1: Basic Structure of Computers:** Computer Types, Functional Units: Input, Control, ALU, Output Unit	https://drive.google.com/drive/folders/1_HwZalMRSpPvR6-vDsUZDEMCEmGpPPMr?usp=sharing	http://nptel.vtu.ac.in/econtent/courses/CSE/06CS46/videos/06CS46_Video_1.mp4	https://drive.google.com/drive/folders/1GsjW8rR2kFem9vcEjJEOds51hE8JHcD-?usp=sharing	4th September 2020
	Lecture 2: Memory, Processor: Data path and Control, Five Execution Steps				7th September 2020
	Lecture 3: Basic Operational Concepts: Connection Between the Processor and the Memory, Main Parts of Processor, Steps To Execute an Instruction, Bus Structure		http://nptel.vtu.ac.in/econtent/courses/CSE/06CS46/videos/06CS46_Video_2.mp4		11th September 2020
	Lecture 4: Buffer Registers, Performance, Processor Clock, Basic Performance Equation, Clock rate, Performance measurement				14th September 2020
	Lecture 5: Problems on performance measurement, Machine Instructions & Programs: Memory-Locations & Addresses, Memory Operations, Instructions & Instruction Sequencing		http://nptel.vtu.ac.in/econtent/courses/CSE/06CS46/videos/06CS46_Video_3.mp4 http://nptel.vtu.ac.in/econtent/courses/CSE/06CS46/videos/06CS46_Video_4.mp4		18th September 2020
	Lecture 6: Addressing Modes, Assembly Language		http://nptel.vtu.ac.in/econtent/courses/CSE/06CS46/videos/06CS46_Video_5.mp4		21st September 2020

	Lecture 7: Basic Input and Output Operations, Stacks and Queues, Subroutines		http://nptel.vtu.ac.in/econtent/courses/CSE/06CS46/videos/06CS46_Video_6.mp4		25th September 2020
	Lecture 8: Additional Instructions, Encoding of Machine Instructions				28th September 2020
Assignment: Objective question will be given at the end of the module **Model question are share at the end of the module**					
Module-2	**Topics [1hr each]**	**PPT**	**Video Links**	**E- Materials**	**Date[2 hours]**
Modules-2: Input/Output Organization	**Lecture 1:** Accessing I/O Devices	https://drive.google.com/drive/folders/1_HwZalMRSpPvR6-vDsUZDEMCEmGpPPMr?usp=sharing	http://nptel.vtu.ac.in/econtent/courses/CSE/06CS46/videos/06CS46_Video_7.mp4	https://drive.google.com/drive/folders/1GsjW8rR2kFem9vcEjJEOds51hE8JHcD-?usp=sharing	5th October 2020
	Lecture 2: Interrupts: Introduction		http://nptel.vtu.ac.in/econtent/courses/CSE/06CS46/videos/06CS46_Video_8.mp4		9th October 2020
	Lecture 3: Interrupt Hardware		https://www.youtube.com/watch?v=lxBfuyOagS8		12th October 2020
	Lecture 4: Handling Multiple Devices, Vectored Interrupts, Controlling Device Requests		https://www.youtube.com/watch?v=TXRWm6rYdkU		16th October 2020
	Lecture 5: Direct Memory Access		http://nptel.vtu.ac.in/econtent/courses/CSE/06CS46/videos/06CS46_Video_10.mp4		17th October 2020
	Lecture 6: Bus Arbitration, Buses: Synchronous bus, Asynchronous bus				19th October 2020
	Lecture 7: Interface Circuits		http://nptel.vtu.ac.in/econtent/courses/CSE/06CS46/videos/06CS46_Video_11.mp4		23rd October 2020
	Lecture 8: Standard I/O Interfaces, – PCI Bus, SCSI Bus,USB.		http://nptel.vtu.ac.in/econtent/courses/CSE/06CS46/videos/06CS46_Video_12.mp4		2nd November 2020
Assignment: Objective question will be given at the end of the module **Model question are share at the end of the module**					
Modules-3	**Topics [1hr each]**	**PPT**	**Video Links**	**E- Materials**	**Date[2 hours]**

Modules-3:Memory System	**Lecture 1**:Basic Concepts, Semiconductor RAM Memories	https://drive.google.com/drive/folders/1_HwZalMRSpPvR6-vDsUZDEMCEmGpPPMr?usp=sharing	http://nptel.vtu.ac.in/econtent/courses/CSE/06CS46/videos/06CS46_Video_14.mp4	https://drive.google.com/drive/folders/1GsjW8rR2kFem9vcEjJEOds51hE8JHcD-?usp=sharing	6th November 2020
	Lecture 2: Read Only Memories, Speed, Size, and Cost		Read-Only Memory (ROM): Definition & Types - Video & Lesson Transcript | Study.com		9th November 2020
	Lecture 3: Cache Memories – Mapping Function		https://youtu.be/QcAaP5V2Gpc http://nptel.vtu.ac.in/econtent/courses/CSE/06CS46/videos/06CS46_Video_16.mp4		13th November 2020
	Lecture 4: Replacement Algorithms		https://www.youtube.com/watch?v=EXRicJapuOQ&feature=youtu.be		16th November 2020
	Lecture 5: Performance Considerations.				20th November 2020
Assignment: Objective question will be given at the end of the module **Model question are share at the end of the module**					
Modules-4:Arithmetic	**Topics [1hr each]**	**PPT**	**Video Links**	**E- Materials**	**Date[2 hours]**
	Lecture 1: Numbers, Arithmetic Operations and Characters	https://drive.google.com/drive/folders/1_HwZalMRSpPvR6-vDsUZDEMCEmGpPPMr?usp=sharing	https://youtu.be/DUVDc9OpcZ0	https://drive.google.com/drive/folders/1GsjW8rR2kFem9vcEjJEOds51hE8JHcD-?usp=sharing	23rd November 2020
	Lecture 2: Addition and Subtraction of Signed Numbers				30th November 2020
	Lecture 3:Design of Fast Adders		https://youtu.be/o2riFl3oFpE		4th December 2020
	Lecture 4: Multiplication of Positive Numbers		https://youtu.be/XWnm1PyMgaY		7th December 2020
	Lecture 5: Signed Operand Multiplication, Fast Multiplication, Integer Division		http://nptel.vtu.ac.in/econtent/courses/CSE/06CS46/videos/06CS46_Video_19.mp4		11th December 2020
Assignment: Objective question will be given at the end of the module **Model question are share at the end of the module**					

	Topics [1hr each]	PPT	Video Links	E- Materials	Date[2 hours]
Modules-5: Basic Processing Unit	**Lecture 1:**Basic Processing Unit: Some Fundamental Concepts	https://drive.google.com/drive/folders/1_HwZalMRSpPvR6-vDsUZDEMCEmGpPPMr?usp=sharing	http://nptel.vtu.ac.in/econtent/courses/CSE/06CS46/videos/06CS46_Video_21.mp4	https://drive.google.com/drive/folders/1GsjW8rR2kFem9vcEjJEOds51hE8JHcD-?usp=sharing	14th December 2020
	Lecture 2: Execution of a Complete Instruction		https://youtu.be/zcxrrOvZW3s		18th December 2020
	Lecture 3: Multiple Bus Organization		https://youtu.be/Ue2Ixag5Fjw		21st December 2020
	Lecture 4: Hard-wired Control, Micro programmed Control.		https://youtu.be/A8weMAyF6UM		25th December 2020
	Lecture 5: Pipelining: Basic concepts of pipelining		https://youtu.be/th2wcy0zJ-o		28th December 2020
Assignment: Objective question will be given at the end of the module **Model question are share at the end of the module**					

18CS35 – Software Engineering (SE)					
Modules	**Topics [1hr each]**	**PPT**	**Video Links**	**E- Materials**	**Date[2 hours]**
MODULE 1: Introduction software engineering process and requirement engineering	Introduction: Software Crisis, Need for Software Engineering. Professional Software Development		https://drive.google.com/file/d/1f0gF-OeS0WdWDI6N0wIWL7m5zRec5bZP/view?usp=sharing	https://drive.google.com/file/d/1QyHSMzZXro_VvR8HLRFKJ2DQVLGBnI7g/view?usp=sharing https://drive.google.com/drive/folders/0B-ITW-kTxwdfZGljOVpBQlNtVnM	**3/09/2020**
	Software Engineering Ethics. Case Studies.		https://drive.google.com/file/d/1VrSl6Rfr6s6dwRcAI-FxAJN3OcZGa_Nd/view?usp=sharing	https://drive.google.com/file/d/1QyHSMzZXro_VvR8HLRFKJ2DQVLGBnI7g/view?usp=sharing https://drive.google.com/drive/folders/0B-ITW-kTxwdfZGljOVpBQlNtVnM	**05/09/2020**

	Software Processes: Models: Waterfall Model (Sec 2.1.1), Incremental Model (Sec 2.1.2)		https://drive.google.com/file/d/1VrSl6Rfr6s6dwRcAI-FxAJN3OcZGa_Nd/view?usp=sharing	https://drive.google.com/file/d/1QLjvCjKRDDbJ8xsU2JPmHXpzwBAwKV-Z/view?usp=sharing https://drive.google.com/drive/folders/0B-ITW-kTxwdfZGljOVpBQlNtVnM	**10/09/2020**
	Spiral Model (Sec 2.1.3). Process activities.		https://drive.google.com/file/d/1u6sVww4ccrFy_g9kv2f_k-zjDrExNkZE/view?usp=sharing	https://drive.google.com/file/d/1QLjvCjKRDDbJ8xsU2JPmHXpzwBAwKV-Z/view?usp=sharing https://drive.google.com/drive/folders/0B-ITW-kTxwdfZGljOVpBQlNtVnM	**12/09/2020**
	Requirements Engineering: Requirements Engineering Processes (Chap 4). Requirements Elicitation and Analysis (Sec 4.5). Functional and non-functional requirements (Sec 4.1).		https://drive.google.com/file/d/1XEMUwXsDgP42yofNtFLEI_9AihvgE-N7/view?usp=sharing	https://drive.google.com/file/d/1QLjvCjKRDDbJ8xsU2JPmHXpzwBAwKV-Z/view?usp=sharing https://drive.google.com/drive/fold	**17/09/2020**

				ers/0B-ITW-kTxwdfZGljOVpBQlNtVnM	
	The software Requirements Document (Sec 4.2). Requirements Specification (Sec 4.3).		**https://drive.google.com/file/d/1c3AhmmuOLgyzm8nnsklFIgaKPTkyS0uk/view?usp=sharing**	https://drive.google.com/file/d/1QLjvCjKRDDbJ8xsU2JPmHXpzwBAwKV-Z/view?usp=sharing	**19/09/2020**
	Requirements validation (Sec 4.6). Requirements Management (Sec 4.7).		**https://drive.google.com/file/d/1xD3YPrfG8ivILuZhIFeama2TcyFMfx1K/view?usp=sharing**	https://drive.google.com/file/d/1QLjvCjKRDDbJ8xsU2JPmHXpzwBAwKV-Z/view?usp=sharing	**24/09/2020**
Assignment: Objective question will be given at the end of the module **Model question are share at the end of the module**					
Module-2	**Topics [1hr each]**	**PPT**	**Video Links**	**E- Materials**	**Date[2 hours]**
Module 2: Introduction, Modelling Concepts and Class Modelling:	**What is Object orientation? What is OO development? OO Themes; Evidence for usefulness of OO development; OO modelling history.**	**https://drive.google.com/file/d/1lvVRP2T9i6k_jdwpxxm3EFpfJU0d1-MM/view?usp=sharing**	**https://drive.google.com/file/d/1_r59Faex3DlvxenDeT69Ig_EkIcjctBy/view?usp=sharing**	**https://drive.google.com/file/d/1lvVRP2T9i6k_jdwpxxm3EFpfJU0d1-MM/view?usp=sharing** **https://drive.google.com/file/d/1QxStc5lgLl9Yb879AfR14wetP6RuqRod/view?usp=sharing**	**26/09/2020 (morning session)**
	Modelling as Design technique: Modelling; abstraction; The Three models. Class Modelling:		**https://drive.google.com/file/d/1f-RcX3laZyuZUM5MTMVafNDnIvXlRzpq/view?usp=sharing**	**https://drive.google.com/file/d/1lvVRP2T9i6k_jdwpxxm3EFpfJU0d1-MM/view?usp=sharing** **https://drive.google.com/file/d/1QxStc5lg**	**26/09/2020 (afternoon session)**

				Ll9Yb879AfR14wetP6RuqRod/view?usp=sharing	
	Object and Class Concept; Link and associations concepts;		https://drive.google.com/file/d/1CtMyMWNXkcdPTCYmOtC5RCCL4ShNIfgR/view?usp=sharing	https://drive.google.com/file/d/1lvVRP2T9i6k_jdwpxxm3EFpfJU0d1-MM/view?usp=sharing https://drive.google.com/file/d/1QxStc5lgLl9Yb879AfR14wetP6RuqRod/view?usp=sharing	1/10/2020
	generalization and inheritance, sample class model		https://drive.google.com/file/d/1KezTdSpcGS2Uqfd0mDa0VTld9v4oae2G/view?usp=sharing	https://drive.google.com/file/d/1lvVRP2T9i6k_jdwpxxm3EFpfJU0d1-MM/view?usp=sharing https://drive.google.com/file/d/1QxStc5lgLl9Yb879AfR14wetP6RuqRod/view?usp=sharing	8/10/2020
	NAVIGATION OF CLASS MODEL OCL		https://www.youtube.com/watch?v=uRZVEpa1MCI https://www.youtube.com/watch?v=BAf6aE-GU10	https://st.inf.tu-dresden.de/files/general/OCLByExampleLecture.pdf https://drive.google.com/file/d/1lvVRP2T9i6k_jdwpxxm3EFpfJU0d1-MM/view?usp=sharing https://drive.google.com/file/d/1QxStc5lgLl9Yb879AfR14wetP6RuqRod/view?usp=sharing	15/10/2020

Assignment: Objective question will be given at the end of the module **Model question are share at the end of the module**					
Module-3	**Topics [1hr each]**	**PPT**	**Video Links**	**E- Materials**	**Date[2 hours]**
system model , design and implementation	**system model introduction**		**https://www.youtube.com/watch?v=h-nPCBuCO1s**	**https://drive.google.com/file/d/1JZwqPwAkh3PYcGf_Jp04PAiq--vTK_xx/view?usp=sharing**	**19/10/2020**
	context model		**https://www.youtube.com/watch?v=WjIuWDGSLpw**	**https://drive.google.com/file/d/1JZwqPwAkh3PYcGf_Jp04PAiq--vTK_xx/view?usp=sharing** **http://csis.pace.edu/~marchese/CS389/L5/Chap5_summary.pdf**	**22/10/2020**
	interaction model		**https://www.youtube.com/watch?v=qO6RrAbTL5M** **https://www.youtube.com/watch?v=Fbcjb_1Zj_Y**	**https://drive.google.com/file/d/1JZwqPwAkh3PYcGf_Jp04PAiq--vTK_xx/view?usp=sharing** **http://csis.pace.edu/~marchese/CS389/L5/Chap5_summary.pdf**	**29/10/2020**
	Behavioral model		**https://www.youtube.com/watch?v=QfqHP_35xPs**	**https://drive.google.com/file/d/1JZwqPwAkh3PYcGf_Jp04PAiq--vTK_xx/view?usp=sharing** **http://csis.pace.edu/~marchese/CS389/L5/Chap5_summary.pdf**	**3/11/2020**
	model driven engineering		**https://www.youtube.com/watch?v=VAsk1--eGrE**	**https://drive.google.com/file/d/1JZwqPwAkh3PYcGf_Jp04PAiq--vTK_xx/view?usp=sharing** **http://csis.pace.edu/~marchese/CS389/L5/Chap5_summary.pdf**	**7/11/2020**

	Design and Implementation: Introduction to RUP		https://www.youtube.com/watch?v=PhId8pmn7yc	https://www.ibm.com/developerworks/rational/library/content/03July/2000/2062/2062_Eeles3.pdf	10/11/2020
	Design Principles		https://www.youtube.com/watch?v=yuWLzUIa4nw	https://www.javatpoint.com/software-engineering-software-design-principles	14/11/2010
	Object-oriented design using the UML).		https://www.youtube.com/watch?v=VnVHgj6OPrQ	https://www.tutorialspoint.com/uml/uml_overview.htm https://www.w3computing.com/systemsanalysis/object-oriented-sad-uml/	16/11/2020
	. Design patterns , Implementation issues		https://www.youtube.com/watch?v=rFqf7NduU8w	https://www.cs.sfu.ca/~wsumner/teaching/276/17-implementation.pdf	18/11/2020
	Open source development		https://www.youtube.com/watch?v=QQzBACyX12M	http://aaaea.org/Al-muhandes/2008/February/open_src_dev_model.htm	19/11/2020
Assignment: Objective question will be given at the end of the module **Model question are share at the end of the module**					
Module-4	**Topics [1hr each]**	**PPT**	**Video Links**	**E- Materials**	**Date[2 hours]**
	Software Testing: Development testing		https://www.youtube.com/watch?v=BNk7vni-1Bo	https://drive.google.com/file/d/1s_OX-MtAfEsmstBgMoDsu1k-s2K7gxMH/view?usp=sharing	20/11/2020
	Test-driven development (Sec 8.2),).		https://www.youtube.com/watch?v=GUsCCN0MCfI	https://drive.google.com/file/d/1s_OX-MtAfEsmstBgMoDsu1k-s2K7gxMH/view?usp=sharing	21/11/1010
	Release testing (Sec 8.3), User testing (Sec 8.4).		https://www.youtube.com/watch?v=tX41leXiTQw https://www.youtube.com/watch?v=PskaS9fVKjA	https://drive.google.com/file/d/1s_OX-MtAfEsmstBgMoDsu1k-s2K7gxMH/view?usp=sharing	24/11/2020
	Test Automation (Page no 212).		https://www.youtube.com/watch?v=QtZ4yV49RtA	https://drive.google.com/file/d/1s_OX-MtAfEsmstBgMoDsu1k-s2K7gxMH/view?usp=sharing	25/11/2020
	Software Evolution: Evolution processes		https://www.youtube.com/watch?v=TcxA-h8o5P4	https://drive.google.com/file/d/1_Z2VkbykP82_jKYJleUcHKkTc_pNiIxU/view?usp=sharing	26/11/2020
	Program evolution dynamics		https://www.youtube.com/watch?v=TcxA-h8o5P4	https://drive.google.com/file/d/1_Z2VkbykP82_jKYJleUcHKkTc_pNiIxU/view?	27/11/2020

				usp=sharing	
	Software maintenance (Sec 9.3). Legacy system management (Sec 9.4		https://www.youtube.com/watch?v=8swQr0kckZI	https://drive.google.com/file/d/1_Z2VkbykP82_jKYJleUcHKkTc_pNiIxU/view?usp=sharing	28/11/2020
	Legacy system management (Sec 9.4		https://www.youtube.com/watch?v=PPSSpDD-kx4	https://drive.google.com/file/d/1_Z2VkbykP82_jKYJleUcHKkTc_pNiIxU/view?usp=sharing	30/11/2020
Assignment: Objective question will be given at the end of the module **Model question are share at the end of the module**					
Module-5	**Topics [1hr each]**	**PPT**	**Video Links**	**E- Materials**	**Date[2 hours]**
	Project Planning: Software pricing (Sec 23.1).		https://www.youtube.com/watch?v=IKcKLOX_nQM	https://drive.google.com/file/d/1vTAEUmEksyxZU6Jpl49GM8aXCneAexPo/view?usp=sharing	1/12/2020
	Plan-driven development (Sec 23.2).		https://www.youtube.com/watch?v=TnnmjXDk6xY	https://drive.google.com/file/d/1vTAEUmEksyxZU6Jpl49GM8aXCneAexPo/view?usp=sharing	5/12/2020
	Project scheduling		https://www.youtube.com/watch?v=k8y6Uotw8go	https://drive.google.com/file/d/1vTAEUmEksyxZU6Jpl49GM8aXCneAexPo/view?usp=sharing	8/12/2020
	Estimation techniques (Sec 23.5).		https://www.youtube.com/watch?v=FSFGWj3idwQ	https://drive.google.com/file/d/1vTAEUmEksyxZU6Jpl49GM8aXCneAexPo/view?usp=sharing	12/12/2020
	Quality management: Software quality (Sec		https://www.youtube.com/watch?v=fhKwJbmaCEg	https://drive.google.com/file/d/14kR3adv59jQj_tRzUAmgGSkah4ljRAmy/view?usp=sharing	15/12/2020
	.Reviews and inspections (Sec 24.3).		https://www.youtube.com/watch?v=G8GBAzvqjE4	https://drive.google.com/file/d/14kR3adv59jQj_tRzUAmgGSkah4ljRAmy/view?usp=sharing	19/12/2020
	Software measurement and metrics (Sec 24.4).		https://www.youtube.com/watch?v=jiOaywcVssQ	https://drive.google.com/file/d/14kR3adv59jQj_tRzUAmgGSkah4ljRAmy/view?usp=sharing	22/12/2020
	Software standards (Sec 24.2)		https://www.youtube.com/watch?v=NYOy9RJ6aLY	https://drive.google.com/file/d/14kR3adv59jQj_tRzUAmgGSkah4ljRAmy/view?usp=sharing	26/12/2020
Assignment: Objective question will be given at the end of the module					

Model question are share at the end of the module

18CS36 – Discrete Mathematical Structures (DMS)					
Modules	**Topics [1hr each]**	**PPT**	**Video Links**	**E- Materials**	**Date[2 hours]**
Module-1: Fundamentals of Logic	Basic connectives and Truth Table	Shared in google class room(class id:rvdvl3g)	https://www.youtube.com/watch?v=i3m0hV157Ro	Shared using google drive(https://drive.google.com/drive/folders/1-HGyarNwKK5uanDvtrQyT7X4egXdfeU2?usp=sharing)	2/9/2020
	Basic connectives and Truth Table				2/9/2020
	Basic connectives and Truth Table		https://www.youtube.com/watch?v=U-unDlcpwWk		3/9/2020
	Basic connectives and Truth Table				3/9/2020
	Logic Equivalence		https://www.youtube.com/watch?v=Ass7qLDCbiE		9/9/2020
	Logic Equivalence				9/9/2020
	Laws Of Logic		https://www.youtube.com/watch?v=Ass7qLDCbiE		10/9/2020
	Laws Of Logic				10/9/2020
	Laws Of Logic		https://www.youtube.com/watch?v=tDH67yRNXzI		16/9/2020
	Laws Of Logic				16/9/2020
	Laws Of Logic		https://www.youtube.com/watch?v=ZEOeN8r		17/9/2020

	Laws Of Logic		GlXU		17/9/2020
	Duality		https://www.youtube.com/watch?v=ZEOeN8rGlXU		23/9/2020
	Duality				23/9/2020
	Logical Implication		https://www.youtube.com/watch?v=6FPpv_A8GpE		26/9/2020
	Rules of Inference				26/9/2020
	Rules of Inference		https://www.youtube.com/watch?v=8DW0K3mnc-0		30/9/2020
	Rules of Inference		https://www.youtube.com/watch?v=8DW0K3mnc-0		30/9/2020
	The Use of Quantifiers, Quantifiers		https://www.youtube.com/watch?v=gyoqX0W-NH4		01/10/2020
	The Use of Quantifiers, Quantifiers		https://www.youtube.com/watch?v=q1rKFGSiZE8		01/10/2020
Assignment: Objective question will be given at the end of the module **Model question are share at the end of the module**					
Modules-2	**Topics [1hr each]**	**PPT**	**Video Links**	**E- Materials**	**Date[2 hours]**
Properties of the Integers	**The Well Ordering Principle – Mathematical Induction** **The Well Ordering Principle**	Shared in google class room(class id:rvdvl3g)	**https://www.youtube.com/watch?v=JTgWbq-S6Zc**	Shared using google drive(https://drive.google.com/drive/folders/1-HGyarNwKK5uanDvtrQyT7X4egXdfeU2?usp=sharing)	**7/10/2020** **8/10/2020**

	– Mathematical Induction				
	The Well Ordering Principle – Mathematical Induction		https://drive.google.com/drive/folders/1l55Oj4JkOom3IYjGu-Go3LYY-OQj8tAp?usp=sharing		14/10/2020
	The Well Ordering Principle – Mathematical Induction				14/10/2020
Fundamental Principles of Counting:	The Rules of Sum and Product		https://drive.google.com/file/d/1VKsGYnAaGzSn3XIuyrXC_ZJAvMN4zPv8/view?usp=sharing		21/10/2020
	Permutations, Combinations		https://drive.google.com/file/d/1VKsGYnAaGzSn3XIuyrXC_ZJAvMN4zPv8/view?usp=sharing		22/10/12020
	The Binomial Theorem,		https://drive.google.com/file/d/1VKsGYnAaGzSn3XIuyrXC_ZJAvMN4zPv8/view?usp=sharing		28/10/2020
	Combinations with Repetition.		https://drive.google.com/file/d/1VKsGYnAaGzSn3XIuyrXC_ZJAvMN4zPv8/view?usp=sharing		29/10/2020
Assignment: Objective question will be given at the end of the module **Model question are share at the end of the module**					
Modules-3	**Topics [1hr each]**	**PPT**	**Video Links**	**E- Materials**	**Date[2 hours]**
Fundamentals of Logic	Relations and Functions	Shared in google class room	https://www.youtube.com/watch?v=FI6j5QZNVx0	http://home.iitk.ac.in/~arlal/book/mth202.pdf	4/11/2020
	Cartesian Products and Relations, Functions – Plain and One-to-One, Onto Functions		https://www.youtube.com/watch?v=K7K3XAM_V-o&list=PLhSp9OSVme		4/11/2020

			vKe5oE8aoGc7b1wxiJPTV5m		
	Logical Implication – Rules of Inference		https://www.youtube.com/watch?v=8DW0K3mnc-0		5/11/2020
	The Pigeon-hole Principle		https://www.youtube.com/watch?v=2-mxYrCNX60&t=35s		5/11/2020
	Function Composition and Inverse Functions		https://www.youtube.com/watch?v=VZX1mAWlybo		11/11/2020
	Relations: Properties of Relations		https://www.youtube.com/watch?v=FI6j5QZNVx0&t=18s		11/11/2020
	Computer Recognition – Zero-One Matrices & Directed Graphs		https://www.youtube.com/watch?v=hGsetI2QW6I		12/11/2020
	Partial Orders – Hasse Diagrams, Equivalence Relations and Partitions		https://www.youtube.com/watch?v=73j_FXBXGm8		12/11/2020
Assignment: Objective question will be given at the end of the module **Model question are share at the end of the module**					
Modules-4	**Topics [1hr each]**	**PPT**	**Video Links**	**E- Materials**	**Date[2 hours]**
The Principle of Inclusion and Exclusion	The Principle of Inclusion and Exclusion	Shared in google class room	https://www.youtube.com/watch?v=GS7dIWA6Hpo	https://math.la.asu.edu/~boerner/mat243/6.5%20Inclusion-Exclusion.pdf	18/11/2020
	Generalizations of the Principle		https://www.youtube.com/watch?v=qjS_6lGyAfE		18/11/2020
	Derangements – Nothing is in its Right Place		https://www.youtube.com/watch?v=EuSlrQyrKbs		19/11/2020

	Rook Polynomials		**https://www.youtube.com/watch?v=HhSvoRngRm4**		**19/11/2020**
	Recurrence Relations		**https://www.youtube.com/watch?v=eAaP4XaB8hM**		**25/11/2020**
	First Order Linear Recurrence Relation		**https://www.youtube.com/watch?v=0-ul9VcFhik**		**25/11/2020**
	The Second Order Linear Homogeneous Recurrence Relation with Constant Coefficients.		**https://www.youtube.com/watch?v=mJPoIxvjUz0**		**26/11/2020**
Assignment: Objective question will be given at the end of the module **Model question are share at the end of the module**					
Modules-5	**Topics [1hr each]**	**PPT**	**Video Links**	**E- Materials**	**Date[2 hours]**
Introduction to Graph Theory	**Definitions and Examples, Subgraphs**	Shared in google class room	**https://www.youtube.com/watch?v=GHOHV6gTOd4**	**https://www.maths.ed.ac.uk/~v1ranick/papers/wilsongraph.pdf**	**02/12/2020**
	Complements		**https://www.youtube.com/watch?v=GHOHV6gTOd4&t=15s**		**03/12/2020**
	Graph Isomorphism		**https://youtu.be/ASZJ5wsZyIs**		**09/12/2020**
	Trees: Definitions		**https://www.youtube.com/watch?v=hBKLhiumhhU**		**10/12/2020**
	Properties, and Examples		**https://www.youtube.com/watch?v=k7cqGtmAOGI**		**16/12/2020**
	Routed Trees, Trees and Sorting		**https://www.youtube.com/watch?v=i6kjKKpBo78**		**17/12/2020**

	Weighted Trees		**https://www.youtube.com/watch?v=EIZaYgUuZPw**		**23/12/2020**
	Prefix Codes		**https://www.youtube.com/watch?v=HST2r5pvJCA**		**24/12/2020**
Assignment: Objective question will be given at the end of the module **Model question are share at the end of the module**					

Class Adviser-