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| **You Tube URLs for Online Teaching during Lockdown**  **Class:** 2nd Year  **Sem.:** IV  **Subject:** Design and Analysis of algorithms  **Sub. Code:** 18CS42  **Name of Faculty:** Prof. Chandrakant R. Belavi | | | | |
| **Module** | **Name of Module** | **Video Lecture Details** | | |
| **Topic** | **You Tube link** | **Video Duration** |
| II | Divide and Conquer | Merge Sort | https://www.youtube.com/watch?v=UWzDUP1e8fg&t=6s | 8:32 |
| Divide & Conquer - Advantages & Disadvantages | https://www.youtube.com/watch?v=\_ogyXIk37sw | 1:57 |
| Topological Sorting | https://www.youtube.com/watch?v=Ealei1xXvy0 | 8:12 |
| III | Greedy Method | Greedy Method Introduction and coin change problem | https://www.youtube.com/watch?v=BJ34T6vPlOM | 4:33 |
| Knapsack Problem | https://www.youtube.com/watch?v=WbfhoQtOlNE | 9:55 |
| Job Sequencing With Deadlines | <https://www.youtube.com/watch?v=1LNnyt0Knrw> | 10:08 |
| Spanning Tree & Prim’s Algorithm | https://www.youtube.com/watch?v=inveiDvw5eQ | 18:05 |
| Kruskal’s Algorithm | https://www.youtube.com/watch?v=9IT5CxQscnY | 13:15 |
| Dijkstra’s Algorithm | https://www.youtube.com/watch?v=gU9hsG\_qBtk | 13:55 |
| Huffman Coding | https://www.youtube.com/watch?v=mLMTEdy1USc | 15:35 |
| Heaps & Heap Sort | <https://www.youtube.com/watch?v=EA7_SDV3uaI> | 10:18 |
| IV | Dynamic Programming | Introduction & Multistage Graph | https://www.youtube.com/watch?v=sKyonZizcEM | 26:41 |
| Warshall’s Algorithm | https://www.youtube.com/watch?v=TlMUnrOmPaQ | 13:15 |
| Floyd’s Algorithm | https://www.youtube.com/watch?v=l-gCgMHC\_kM | 16:56 |
| Optimal Binary Search Tree | https://www.youtube.com/watch?v=pQNI1FuHQz8 | 22:33 |
| Knapsack Problem | https://www.youtube.com/watch?v=46iW-rCibvE | 18:36 |
| Bellman-Ford Algorithm | https://www.youtube.com/watch?v=oKWCcszc9nU | 20:58 |
| Travelling Sales Person Problem | https://www.youtube.com/watch?v=ORLWm2V3TAc | 14:11 |
| V | Backtracking,  Branch and Bound, NP, Np-Hard | Backtracking General Method | https://www.youtube.com/watch?v=qY4D6nxhKn4&t=75s | 4:13 |
| Backtracking n Queen’s Problem | https://www.youtube.com/watch?v=KZQSFNGjIEo | 8:18 |
| Backtracking Sum of Subset Problem | https://www.youtube.com/watch?v=B2pduHjMnZ0&t=4s | 8:18 |
| Backtracking Graph Coloring | https://www.youtube.com/watch?v=HoBAAHbXV\_w&t=5s | 7:31 |
| Backtracking Hamiltonian Cycle | https://www.youtube.com/watch?v=xuOwyJRD0WQ&t=10s | 3:46 |
| Branch n Bound Assignment Problem | https://www.youtube.com/watch?v=\_4ZBgY4vKvE&t=481s | 20:13 |
| Branch n Bound Knapsack Problem | https://www.youtube.com/watch?v=73JwgVhmAGE&t=65s | 16:03 |
| LC Branch and Bound Solution | https://studio.youtube.com/video/YfSvSo7vXlc/edit | 20:23 |
| FIFO Branch and Bound Solution | https://studio.youtube.com/video/6RtTzcQ1FJ0/edit | 13:22 |
| NP Complete and NP Hard Problems | https://studio.youtube.com/video/DDbN9M2bJ2c/edit | 10:20 |