

Subject: Infrastructure Engineering and Construction Techniques Class: T.E. SEM-I Division: A Branch: Civil Engineering Year 2017-2018		
Lecture No	Scheduled Date	Topics to be covered on the scheduled date
12	17-Jul	Concept of negative cant, Points, crossings and turnouts- functions, Components, elements of points,
13	18-Jul	Types of crossings and turnouts, Track maintenance: Regular and Periodic
Unit III - Construction Techniques		
14	19-Jul	Necessity of mechanization, Dredging techniques, Use of barges
15	24-Jul	Dewatering techniques- Well Point system, Vacuum dewatering,
16	25-Jul	Electro osmosis, Underwater drilling and blasting, Grouting methods in soft and hard soil
17	26-Jul	Diaphragm walls- purpose and construction methods
18	31-Jul	Prefabrication – applications, advantages and disadvantages.
Unit IV – Tunneling		
19	1-Aug	Tunneling, functions & types of tunnel
20	2-Aug	Criteria for selection of size & shape of tunnels
21	8-Aug	Pilot tunnel, shaft, addit and portal, Needle beam,
22	9-Aug	NATM, TBM & earth pressure balance method of tunneling in soft soil
23	14-Aug	Drilling & blasting method of tunneling including various operations like mucking
24	16-Aug	Drainage in tunneling- Pre drainage and permanent drainage

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25	21-Aug	Ventilation in tunneling- temporary and permanent
26	22-Aug	Micro tunneling and trenchless tunneling
Unit V- Docks & Harbors		
27	23-Aug	Introduction, Requirements of harbors and ports
28	28-Aug	Classification of harbors with examples
29	29-Aug	Selection of site for harbor
30	30-Aug	Various components of ports, Break waters- types
31	4-Sep	comparison, design criteria ,
32	5-Sep	methods of construction, Tetra pod,
33	6-Sep	Tri bar, Hexapod, Quay wall, Wet & dry dock,
34	11-Sep	Floating dock, Wharves, Jetties,
35	12-Sep	Types of fenders, Dolphins, Marin railway
Unit VI - Construction Equipments		
36	13-Sep	Dozers, Power shovels, Excavators
37	18-Sep	Loaders, Scrapers, Dumpers, Drag line, Clamp shell, Compactors, Pavers,

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38	19-Sep	Factors affecting performance, selection of equipment
39	20-Sep	Various types of hoists and cranes and selection
40	25-Sep	Boom placers, Simple numerical problems on cycle time and production rate
41	26-Sep	Economic maintenance & repair of construction equipment.