



<b>Subject: Infrastructure Engineering and Construction Techniques    Class: T.E. SEM-I    Division: B    Branch: Civil Engineering    Year 2017-2018</b>		
<b>Lecture No</b>	<b>Scheduled Date</b>	<b>Topics to be covered on the scheduled date</b>
12	13-Jul	Concept of negative cant, Points, crossings and turnouts- functions, Components, elements of points,
13	13-Jul	Types of crossings and turnouts, Track maintenance: Regular and Periodic
<b>Unit III - Construction Techniques</b>		
14	17-Jul	Necessity of mechanization, Dredging techniques, Use of barges
15	20-Jul	Dewatering techniques- Well Point system, Vacuum dewatering,
16	20-Jul	Electro osmosis, Underwater drilling and blasting, Grouting methods in soft and hard soil
17	24-Jul	Diaphragm walls- purpose and construction methods
18	27-Jul	Prefabrication – applications, advantages and disadvantages.
<b>Unit IV – Tunneling</b>		
19	27-Jul	Tunneling, functions & types of tunnel
20	31-Jul	Criteria for selection of size & shape of tunnels
21	3-Aug	Pilot tunnel, shaft, addit and portal, Needle beam,
22	3-Aug	NATM, TBM & earth pressure balance method of tunneling in soft soil
23	10-Aug	Drilling & blasting method of tunneling including various operations like mucking
24	10-Aug	Drainage in tunneling- Pre drainage and permanent drainage

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25	14-Aug	Ventilation in tunneling- temporary and permanent
26	17-Aug	Micro tunneling and trenchless tunneling
<b>Unit V- Docks &amp; Harbors</b>		
27	17-Aug	Introduction, Requirements of harbors and ports
28	21-Aug	Classification of harbors with examples
29	24-Aug	Selection of site for harbor
30	24-Aug	Various components of ports, Break waters- types
31	28-Aug	comparison, design criteria ,
32	31-Aug	methods of construction, Tetra pod,
33	31-Aug	Tri bar, Hexapod, Quay wall, Wet & dry dock,
34	4-Sep	Floating dock, Wharves, Jetties,
35	7-Sep	Types of fenders, Dolphins, Marin railway
<b>Unit VI - Construction Equipments</b>		
36	7-Sep	Dozers, Power shovels, Excavators
37	11-Sep	Loaders, Scrapers, Dumpers, Drag line, Clamp shell, Compactors, Pavers,

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38	14-Sep	Factors affecting performance, selection of equipment
39	14-Sep	Various types of hoists and cranes and selection
40	18-Sep	Boom placers, Simple numerical problems on cycle time and production rate
41	21-Sep	Economic maintenance & repair of construction equipment.