

GANESH INSTITUTE OF ENGINEERING AND TECHNOLOGY, POLYTECHNIC

DEPARTMENT OF CIVIL ENGINEERING

Name: SASMITA DASH

LESSON PLAN CUM PROGRESS REPORT

SUBJECT: Advanced Construction Techniques & Equipment

SEMESTER:6TH

BRANCH:CIVILENGINEERING

| LECTURE NO. | CO | BTL | TOPIC TO BE COVERED | WEB REFERENCE IF ANY | PLAN DATE | ACTION DATE | REVIEW BY HOD |
|-------------|-----|-----|---|---|-----------|-------------|---------------|
| 1 | CO1 | 1 | Advanced construction materials Fibers and Plastics- Types of fibers- Steel, Carbon, glass fibers, Use of fibers as construction material, properties of Fibers. | https://youtu.be/vP5AKQuug-k?si=kDiombbHBmHoayO9 | 23.12.25 | | |
| 2 | CO1 | 1 | Types of fibers- Steel, Carbon, glass fibers, Use of fibers as construction material, properties of Fibers. | https://youtu.be/vP5AKQuug-k?si=kDiombbHBmHoayO9 | 24.12.25 | | |
| 3 | CO1 | 1 | Types of plastics- PVC, RPVC, HDPE, FRP, GRP etc. Colored plastic sheets. Use of plastic as construction material. | https://youtu.be/BoKkzMRPQUg?si=YvEZk0RM6ZQIG9T2 | 26.12.25 | | |
| 4 | CO1 | 2 | Types of plastics- PVC, RPVC, HDPE, FRP, GRP etc. Colored plastic sheets. Use of plastic as construction material. | https://youtu.be/BoKkzMRPQUg?si=YvEZk0RM6ZQIG9T2 | 30.01.26 | | |
| 5 | CO1 | 2 | Artificial Timbers – Properties and uses of artificial timber | https://youtu.be/g7Uzb4UCFls?si=oStnUmZ7ghOIVhSC | 31.01.26 | | |
| 6 | CO1 | 3 | Types of artificial timber available in market, strength of artificial timber. | https://youtu.be/g7Uzb4UCFls?si=oStnUmZ7ghOIVhSC | 02.01.26 | | |
| 7 | CO1 | 3 | Miscellaneous materials – Properties and uses of acoustics materials, wall claddings, | | 02.01.26 | | |
| 8 | CO1 | 3 | Miscellaneous materials – Properties and uses of acoustics materials, wall claddings, | | 02.01.26 | | |
| 9 | CO1 | 2 | plaster boards, micro-silica, artificial sand, bonding agents, adhesives etc. | https://youtu.be/JvAVlrJNsl4?si=QnhYIEA-LRILUvcM | 06.01.26 | | |
| 10 | CO1 | 2 | plaster boards, micro-silica, artificial sand, bonding agents, adhesives etc. | https://youtu.be/JvAVlrJNsl4?si=QnhYIEA-LRILUvcM | 06.01.26 | | |
| 11 | CO1 | 1 | Prefabrication Introduction, necessity and scope of prefabrication of buildings, | https://youtu.be/JvAVlrJNsl4?si=QnhYIEA-LRILUvcM | 07.01.26 | | |
| 12 | CO1 | 1 | history of prefabrication, current uses of prefabrication , types of prefabricated systems, | https://youtu.be/JvAVlrJNsl4?si=QnhYIEA-LRILUvcM | 07.01.26 | | |

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| 13 | CO1 | 1 | history of prefabrication, current uses of prefabrication , types of prefabricated systems, | https://youtu.be/JvAVlrJNsl4?si=QnhYiEA-LRILUvcM | 08.01.26 | | |
| 14 | CO1 | 2 | classification of prefabrication, advantages and disadvantages of prefabrication, | https://youtu.be/dikoxK3AcIE?si=bF9NuViCMCLB_xC0 | 09.01.26 | | |
| 15 | CO1 | 1 | The theory and process of prefabrication, design principle of prefabricated systems | https://youtu.be/dikoxK3AcIE?si=bF9NuViCMCLB_xC0 | 13.01.26 | | |
| 16 | CO1 | 2 | types of prefabricated elements, modular coordination | https://youtu.be/thL_UH7EAU?si=HuQhBNI5pli8b37T | 13.01.26 | | |
| 17 | CO1 | 1 | types of prefabricated elements, modular coordination | https://youtu.be/thL_UH7EAU?si=HuQhBNI5pli8b37T | 15.01.26 | | |
| 18 | CO1 | 2 | Indian standard recommendation for modular planning. | | 16.01.26 | | |
| 19 | CO1 | 1 | Earthquake Resistant Construction Building Configuration | https://youtu.be/7Dg9bThG1rg?si=siMfyaYwJgASTkYF | 16.01.26 | | |
| 20 | CO2 | 3 | Lateral Load resisting structures | https://youtu.be/jmf0d4AcYug?si=JSqVcVeTA6VFmhqC | 20.01.26 | | |
| 21 | CO2 | 1 | Building characteristics | https://youtu.be/jmf0d4AcYug?si=JSqVcVeTA6VFmhqC | 20.01.26 | | |
| 22 | CO2 | 2 | Effect of structural irregularities-vertical irregularities, plan configuration problems. | https://youtu.be/W_42U_Oyok?si=WJaspIRJ8RdHtgBt | 20.01.26 | | |
| 23 | CO2 | 1 | Effect of structural irregularities-vertical irregularities, plan configuration problems. | https://youtu.be/W_42U_Oyok?si=WJaspIRJ8RdHtgBt | 21.01.26 | | |
| 24 | CO2 | 2 | Safety consideration during additional construction and alteration of existing Buildings. | https://youtube.com/shorts/qg-BzugcUAY?si=u7k-jCF8qVFyyNPR | 22.01.26 | | |
| 25 | CO2 | 1 | Additional strengthening measures in masonry building-corner reinforcement, lintel band, sill band, plinth band, roof band, gable band etc. | | 27.01.26 | | |
| 26 | CO2 | 2 | Additional strengthening measures in masonry building-corner reinforcement, lintel band, sill band, plinth band, roof band, gable band etc. | | 28.01.26 | | |
| 27 | CO2 | 1 | Retrofitting of Structures Seismic retrofitting of reinforced concrete buildings | https://youtu.be/RRvITIPTTZ0?si=ctb_MbIYN7uBP6Gx | 29.01.26 | | |
| 28 | CO2 | 2 | Seismic retrofitting of reinforced concrete buildings | https://youtu.be/RRvITIPTTZ0?si=ctb_MbIYN7uBP6Gx | 30.01.26 | | |
| 29 | CO2 | 2 | Seismic retrofitting of reinforced concrete buildings | https://youtu.be/RRvITIPTTZ0?si=ctb_MbIYN7uBP6Gx | 03.02.26 | | |
| 30 | CO2 | 1 | Sources of weakness in RC frame building | https://youtu.be/_sfBoRmr9Ak?si=Tzv_LUQCIOLCZoBd | 04.02.26 | | |
| 31 | CO2 | 3 | Sources of weakness in RC frame building | https://youtu.be/_sfBoRmr9Ak?si=Tzv_LUQCIOLCZoBd | 05.02.26 | | |
| 32 | CO3 | 2 | Sources of weakness in RC frame building | https://youtu.be/_sfBoRmr9Ak?si=Tzv_LUQCIOLCZoBd | 06.02.26 | | |

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| 33 | C03 | 3 | Classification of retrofitting techniques and their uses | https://youtu.be/46YGCwCaySA?si=SGKN7JERsdR-sUrg | 10.02.26 | | |
| 34 | C03 | 3 | Building Services Cold Water Distribution in high rise building, lay out of installation | https://youtu.be/46YGCwCaySA?si=SGKN7JERsdR-sUrg | 11.02.26 | | |
| 35 | C03 | 3 | Sanitation –soil and waste water installation in high rise buildings | | 12.02.26 | | |
| 36 | C03 | 3 | Electrical services – i) requirements in high rise buildings ii) Layout of wiring - types of wiring | https://youtu.be/HmgqGPzYSMs?si=rjvnONWynVU75Pzf | 13.02.26 | | |
| 37 | C03 | 1 | iii) Fuses and their types iv) Earthing and their uses | https://youtu.be/eMR1rT8p-oA?si=qt2vJ8y53ZR2Osf | 17.02.26 | | |
| 38 | C03 | 2 | Lighting – Requirement of lighting, Measurement of light intensity | https://youtu.be/eMR1rT8p-oA?si=qt2vJ8y53ZR2Osf | 18.02.26 | | |
| 39 | C03 | 3 | Ventilation - Methods of ventilation (Natural and artificial Systems of ventilation) problems on ventilation | https://youtu.be/D6wjzhJX3g?si=e2veyPo-jg0Szsxd | 20.02.26 | | |
| 40 | C03 | 3 | Ventilation - Methods of ventilation (Natural and artificial Systems of ventilation) problems on ventilation | https://youtu.be/D6wjzhJX3g?si=e2veyPo-jg0Szsxd | 24.02.26 | | |
| 41 | C03 | 1 | Mechanical Services- Lifts, Escalator, Elevators – types and uses | https://youtu.be/rKp4pe92ljg?si=8fOnDeK5mwrJ2GW3 | 25.02.26 | | |
| 42 | C03 | 1 | Construction and earth moving equipments – Planning and selection of construction equipments | https://youtu.be/rKp4pe92ljg?si=8fOnDeK5mwrJ2GW3 | 26.02.06 | | |
| 43 | C03 | 1 | Planning and selection of construction equipments | https://youtu.be/ohjerDia6WM?si=BT06errqMnxtvvK4 | 05.03.26 | | |
| 44 | C03 | 2 | Planning and selection of construction equipments | https://youtu.be/ohjerDia6WM?si=BT06errqMnxtvvK4 | 06.03.26 | | |
| 45 | C03 | 1 | Study on earth moving equipments like drag line, tractor, bulldozer, Power shovel | https://youtu.be/ohjerDia6WM?si=BT06errqMnxtvvK4 | 10.03.26 | | |
| 46 | C03 | 3 | Study on earth moving equipments like drag line, tractor, bulldozer, Power shovel | https://youtu.be/ohjerDia6WM?si=BT06errqMnxtvvK4 | 11.03.26 | | |
| 47 | C03 | 3 | Study on earth moving equipments like drag line, tractor, bulldozer, Power shovel | https://youtu.be/ohjerDia6WM?si=BT06errqMnxtvvK4 | 12.03.26 | | |
| 48 | C03 | 3 | Study and uses of compacting equipments like tamping rollers, Smooth wheel rollers, Pneumatic tired rollers and vibrating compactors | | 13.03.26 | | |
| 49 | C03 | 3 | Study and uses of compacting equipments like tamping rollers, Smooth wheel rollers, Pneumatic tired rollers and vibrating compactors | | 17.03.26 | | |
| 50 | C03 | 1 | Owning and operating cost – problems | | 18.03.26 | | |
| 51 | C04 | 2 | Owning and operating cost – problems | | 25.03.26 | | |
| 52 | C03 | 3 | Soil reinforcing techniques Necessity of soil reinforcing. | https://youtu.be/HVzGKUIG2ek?si=SmcX21hAYHIT78p4 | 27.03.26 | | |

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| 53 | C03 | 3 | Necessity of soil reinforcing. | https://youtu.be/HVzGKUIG2ek?si=SmcX21hAYHIT78p4 | 02.04.26 | | |
| 54 | C03 | 1 | Necessity of soil reinforcing. | https://youtu.be/HVzGKUIG2ek?si=SmcX21hAYHIT78p4 | 02.04.26 | | |
| 55 | C03 | 1 | Use wire mesh and geo-synthetics | https://youtu.be/le9O91LqA5s?si=FeKIEzTL8nIPk30l | 07.04.26 | | |
| 56 | C03 | 1 | Use wire mesh and geo-synthetics | https://youtu.be/le9O91LqA5s?si=FeKIEzTL8nIPk30l | 08.04.26 | | |
| 57 | C03 | 2 | Strengthening of embankments, Slope stabilization in cutting and embankments by soil reinforcing techniques. | https://youtu.be/2GIU_wtFJKU?si=jISjq-gj-9WKrugP | 09.04.26 | | |
| 58 | C03 | 1 | Strengthening of embankments, Slope stabilization in cutting and embankments by soil reinforcing techniques. | https://youtu.be/2GIU_wtFJKU?si=jISjq-gj-9WKrugP | 09.04.26 | | |
| 59 | C03 | | Strengthening of embankments, Slope stabilization in cutting and embankments by soil reinforcing techniques. | https://youtu.be/2GIU_wtFJKU?si=jISjq-gj-9WKrugP | 10.04.26 | | |
| 60 | C03 | 3 | Advanced construction materials Fibers and Plastics- Types of fibers- Steel, Carbon, glass fibers, Use of fibers as construction material, properties of Fibers. | https://youtu.be/lGari9cbRpl?si=l9mCTFnAHpTtKtim | 11.04.26 | | |

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