# LESSON PLAN

| DISCIPLINE-CIVIL ENGG. | SEMESTER-6TH | NAME OF THE TEACHING FACULTY-PRIYABRATA TRIPATHY |
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| SUBJECT-ACT&E | NO. OF DAYS PER WEEK CLASS ALLOTTED-03 | SEMESTER FROM DATE-13/02/23 TO DATE-23/05/23 NO. OF WEEKS-15 |

| WEEK | CLASS DAY | | THEORY TOPICS |
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| 1ST | 1st | | **Advanced construction materials** 1.1 Fibers and Plastics- |
| | 2nd | | Types of fibers- Steel, Carbon, glass fibers, |
| | 3rd | | Use of fibers as construction material |
| 2ND | 1st | | properties of Fibers. Types of plastics- PVC, RPVC,. |
| | 2nd | | HDPE, FRP, GRP,etc |
| | 3rd | | . Colored plastic sheets. Use of plastic as construction material. |
| 3RD | 1st | | 1.2 Artificial Timbers – Properties and uses of artificial timber. |
| | 2nd | | Types of artificial timber available in market, strength of artificial timber. |
| | 3rd | | 1.3 Miscellaneous materials – Properties and uses of acoustics materials, wall claddings, plaster boards, |
| 4TH | 1st | | micro-silica, artificial sand, bonding agents, adhesives etc. |
| | 2nd | | Prefabrication 2.1 Introduction, necessity and scope of prefabrication of buildings |
| | 3rd | | history of prefabrication, current uses of prefabrication |
| 5TH | 1st | | types of prefabricated systems |
| | 2nd | | advantages and disadvantages of prefabrication |
| | 3rd | | classification of prefabrication |
| 6TH | 1st | | 2.2 The theory and process of prefabrication, design principle of prefabricated systems |
| | 2nd | | . types of prefabricated elements, modular coordination |
| | 3rd | | 2.3 Indian standard recommendation for modular planning |
| 7TH | 1st | | **Earthquake Resistant Construction** 3.1 Building Configuration |
| | 2nd | | 3.2 Lateral Load resisting structures |
| | 3rd | | 3.3 Building characteristics |

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| **8TH** | 1st | | 3.4 Effect of structural irregularities-vertical irregularities, plan configuration problems |
| | 2nd | | 3.5 Safety consideration during additional construction and alteration of existing Buildings |
| | 3rd | | 3.6 Additional strengthening measures in masonry building-corner reinforcement, lintel band, sill band, plinth band, roof band, gable band, etc. |
| **9TH** | 1st | | **Retrofitting of Structures**<br>4.1 Seismic retrofitting of reinforced concrete buildings : |
| | 2nd | | 4.2 -Sources of weakness in RC frame building |
| | 3rd | | 4.3 -Classification of retrofitting techniques and their uses |
| **10TH** | 1st | | 5.1 Cold Water Distribution in high rise building, lay out of installation |
| | 2nd | | 5.2 Hot water supply – General principles for central plants-layout |
| | 3rd | | 5.3 Sanitation –soil and waste water installation in high rise buildings |
| **11TH** | 1st | | . 5.4 Electrical services – i) requirements in high rise buildings ii) Layout of wiring |
| | 2nd | | . - types of wiring iii) Fuses and their types iv)Earthing and their uses |
| | 3rd | | 5.5 Lighting – Requirement of lighting, Measurement of light intensity |
| **12TH** | 1st | | 5.6 Ventilation - Methods of ventilation (Natural and artificial Systems of ventilation) problems on ventilation |
| | 2nd | | 5.7 Mechanical Services- Lifts, Escalator, Elevators – types and uses. |
| | 3rd | | **Construction and earth moving equipments –**<br>6.1 Planning and selection of construction equipments , |
| **13TH** | 1st | | 6.2 Study on earth moving equipments like drag line, tractor, bulldozer, Power shovel |
| | 2nd | | 6.3 Study and uses of compacting equipments like tamping rollers, Smooth wheel rollers, Pneumatic tired rollers and vibrating compactors |
| | 3rd | | 6.4 Owning and operating cost – problems |
| **14TH** | 1st | | **Soil reinforcing techniques**<br>7.1 Necessity of soil reinforcing |
| | 2nd | | 7.2 Use wire mesh and geo-synthetics |
| | 3rd | | 7.3 Strengthening of embankments |
| **15TH** | 1st | | Slope stabilization in cutting and embankments by soil reinforcing techniques. |

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| | 2nd | | Discussion of important questions and answers |

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