BHUBANANANDA ODISHA SCHOOL OF ENGINEERING, CUTTACK

DEPARTMENT OF CIVIL ENGINEERING



LESSON PLAN

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| SUBJECT: ADVANCED CONSTRUCTION TECHNIQUES & EQUIPMENT (TH 4) | ACCADEMIC SESSION: 2021-22 |
| FACULTY: MISS SANGITA MOHANTY | SEMESTER: 6TH |
|  | SEC: B |

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| H O D (Civil Engg.) |

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| **Discipline:**  **Civil Engineering** | **Semester :6th** | | | **Name of the teaching faculty: SANGITA MOHANTY** |
| **Subject:**  **Advanced Construction Techniques & Equipment** | **No. Of days /per week class allotted:04 periods per week**  **(Mon-1, wed-1,Fri-2)** | | | **Semester from date: 10/03/2022**  **To Date: 10/06/2022,No. of week-14 week** |
| **Week** | **Class day** | | **No of period available** | **Theory topics** |
| 1st | 11/03/2022 | 2 | | 1.1 Fibers and plastic:-Types of fibers-steel,carbon, glass fibers as construction materials, properties of fibers |
| 2nd | 14/03/2022 | 1 | | 1.1 Types of plastics-PVC,RPVC,HDPE,FRP,GRP,etc.Colored plastic sheets.Use of plastic as construction material |
| 16/03/2022 | 1 | | 1.2 Artificial Timber-Properties and uses of artificial timber.Types of artificial timber available in market, strength of artificial timber. |
| 21/03/2022 | 1 | | 1.3 Miscellaneous materials-Properties and uses of acoustics materials,wall cladding |
| 23/03/2022 | 1 | | 1.3 plaster boards,micro-silica,artificialsand,bondingagents,adhesives etc. |
| 3rd | 25/03/2022 | 2 | | 2.1 Introduction,necessity and scope of prefabrication |
| 28/03/2022 | 1 | | 2.1 History of prefabrication,current uses of prefabrication,types of prefabricated systems  Classification of prefabrication,advantages and disadvantages of prefabrication |
| 30/03/2022 | 1 | | Monthly Class Test 1 |
| 4th | 04/04/2022 | 1 | | 2.2 The theory and process of prefabrication |
| 06/4/2022 | 1 | | 2.2 Design principle of prefabricated systems,types of prefabricated elements |
| 08/04/2022 | 2 | | 2.2 modular coordination  2.3 Indian standard recommendation for modular planning |
| 11/4/2022 | 1 | | 3.1 Building configuration |
| 5th | 13/04/2022 | 1 | | 3.1 Retrofitting of reinforced cement concrete |
| 18/04/2022 | 1 | | 3.2 Lateral load resisting structures3 Building characteristics |
| 6th | 20/04/2022 | 1 | | 3.3 Building characteristics |
| 22/4/2022 | 2 | | 3.4 Effect of srtuctural irregularities-vertical irregularities,plan configuration problems. |
| 25/04/2022 | 1 | | 3.5 Safety consideration during additional construction and alteration of existing buildings. |
| 27/04/2022 | 1 | | Monthly Class Test 2 |
| 7TH | 29/04/2022 | 2 | | 3.6 Additional strengthening measures in masonry building-corner reinforcement ,lintel band,sill band etc.  **4 Retrofitting of Structure**  4.1 Seismic retrofitting of reinforced concrete buildings |
| 02/05/2022 | 1 | | 4.2 Sources of weakness in RC frame building  4.3 classification of retrofitting techniques and their uses |
| 04/5/2022 | 1 | | 5.1 Cold water distribution in high rise building,layout of installation |
| 8TH | 06/5/2022 | 2 | | 5.2 Hot water supply -general principles for central plants- layout |
| 09/05/2022 | 1 | | Intrnal Assessment |
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| 11 //05/2022 | 1 | | 5.4 Electrical services-i)requirements in high rise buidings ii)layout of wiring iii)fuses and their types  iv) earthing |
| 13/05/2022 | 2 | | 5.5 Lighting |
| 9TH | 16/05/2022 | 1 | | 5.6 Ventilation |
| 18//05/2022 | 1 | | 5.7 Mechanical services-lift ,escalator,elevators-types and uses. |
| 20/05/2022 | 2 | | 6.1 Planning and selection of construction equipments |
| 23/05/2022 | 1 | | Advantages of Pneumatic roller and compactors |
| 10TH | 25/50/2022 | 1 | | 6.2 Study on earth moving equipments |
| 27/05/2022 | 2 | | 6.3 Study and uses of compacting equipments like tamping rollers,smooth wheel rollers,pneumatic tired rollers and vibrating compactors |
| 30/05/2022 | 1 | | Monthly Class test 3 |
| 01/06/2022 | 1 | | 6.4 Owning and operating cost-problems |
| 11TH | 03/06/2022 | 1 | | 7.1 Necessity of soil reinforcing |
| 7.2 Use wire mesh and geo-synthetics |
| 7.3 Strengthening of embankments |
| 7.3 Slope stabilization in cutting and embankments by soil reinforcing techniques. |
| 12TH | 6/06/2022 | 1 | | Revision |
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| 13TH | 8/06/2022 | 1 | | Previous years questions discussion |
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| 14TH | 10/06/2022 | 1 | | Revision |
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