

**GOVERNMENT POLYTECHNIC, SAMBALPUR (RENGALI)**

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**LESSON PLAN OF SUBJECT- Th 3. ADVANCED CONSTRUCTION TECHNIQUES & EQUIPMENT , 6TH SEM, S-22 w.e.f. 10.03.2022**

DATE	WEEK NO.	TOPIC	PERIODS ASSIGNED PER TOPIC	PERIODS AVAILABLE PER WEEK
10.03.22 TO 12.03.22	W-1	<p><b>1 Advanced construction materials</b></p> <p>1.1 Fibers and Plastics- Types of fibers- Steel, Carbon, glass fibers, Use of fibers as construction material, properties of Fibers.</p> <p>Types of plastics- PVC, RPVC, HDPE, FRP, GRP etc. Colored plastic sheets. Use of plastic as construction material.</p> <p>1.2 Artificial Timbers – Properties and uses of artificial timber. Types of artificial timber available in market, strength of artificial timber.</p> <p>1.3 Miscellaneous materials – Properties and uses of acoustics materials, wall claddings, plaster boards, micro-silica, artificial sand, bonding agents, adhesives etc.</p>	10	2
14.03.22 TO 17.03.22	W-2			4
21.03.22 TO 26.03.22	W-3			4
28.03.22 To 02.04.22	W-4	<p><b>2 Prefabrication</b></p> <p>2.1 Introduction, necessity and scope of prefabrication of buildings, history of prefabrication, current uses of prefabrication , types of prefabricated systems, classification of prefabrication, advantages and disadvantages of prefabrication,</p> <p>2.2 The theory and process of prefabrication, design principle of prefabricated systems, types of</p>	8	4

11.04.22 TO 16.04.22	W-5	prefabricated elements, modular coordination 2.3 Indian standard recommendation for modular planning.		4
18.04.22 TO 23.04.22	W-6	<b>3 Earthquake Resistant Construction</b> 3.1 Building Configuration 3.2 Lateral Load resisting structures 3.3 Building characteristics		4
25.04.22 TO 30.04.22	W-7	3.4 Effect of structural irregularities-vertical irregularities, plan configuration problems. 3.5 Safety consideration during additional construction and alteration of existing Buildings. 3.6 Additional strengthening measures in masonry building-corner reinforcement, lintel band, sill band, plinth band, roof band, gable band etc.	8	4
02.05.22 TO 07.05.22	W-8	<b>4. Retrofitting of Structures</b> 4.1 Seismic retrofitting of reinforced concrete buildings :		4
09.05.22 TO 14.05.22	W-9	4.2 -Sources of weakness in RC frame building 4.3 -Classification of retrofitting techniques and their uses	8	4
17.05.22 TO 21.05.22	W-10	<b>5 Building Services</b> 5.1 Cold Water Distribution in high rise building, lay out of installation 5.2 Hot water supply – General principles for central plants-layout 5.3 Sanitation –soil and waste water installation in high rise buildings 5.4 Electrical services – i) requirements in high rise buildings ii) Layout of wiring - types of wiring iii) Fuses and their uses iv) Earthing and their uses	8	4

