RAJIV GANDHI PROUDYOGIKI VISHWAVIDYALAYA, BHOPAL

New Scheme Based On AICTE Flexible Curricula

Civil Engineering, VI-Semester

Departmental Elective CE 603(B) Precast & Modular Construction

Precast & Modular Construction

Unit – I
Introduction-Need for prefabrication – Principles – Materials – Modular coordination – Standardization –Systems – Production – Transportation – Erection.

Unit – II
Prefabricated components-Behavior of structural components – Large panel constructions – Construction of roof and floor slabs – Wall panels – Columns – Shear walls

Unit – III
DESIGN PRINCIPLES Disuniting of structures- Design of cross section based on efficiency of material used – Problems in design because of joint flexibility – Allowance for joint deformation.

Unit – IV
Joints in Structural Members-Joints for different structural connections – Dimensions and detailing – Design of expansion joints

Unit – V
Design of abnormal load: Progressive collapse – Code provisions – Equivalent design loads for considering abnormal effects such as earthquakes, cyclones, etc., – Importance of avoidance of progressive collapse.

Reference Books: -

1. CBRI, Building materials and components, India, 1990
2. Gerostiza C.Z., Hendrikson C. and Rehat D.R., "Knowledge based process planning for construction and manufacturing", Academic Press Inc., 1994