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| AR 174  Disaster Resistance Architecture and Management | **L-T-P**  **2-1-0**  **3 credit** | |
| Objective : To expose the students to process of Disaster management, mitigation and preparedness; techniques of monitoring and design against the disasters. | | |
| **Unit-1 (Disaster types, characteristics and their causes)**  Concept of disaster. Building Safety from Natural Hazards/Types of Disaster (natural and manmade): Earthquake, Fire, Cyclone, Flood, Landslide, land subsidence etc.  Seismology, Earthquake occurrence in the world, plate tectonics, faults, earthquake hazard maps in India  Causes of earthquakes, seismic waves, magnitude intensity, and epicenter and energy release, characteristics of strong earthquake ground motions.  **Unit-2 (Shape and form of building and their services to undertake the disaster)**  Building shapes, Architectural features and design of building in seismic zones.  Affects of Earthquake on buildings.  Indian Seismic Codes.  Different types of Building such as structures of - Brick Masonry, Stone Masonry, Reinforced concrete etc.  Elements to make buildings Earthquake Safe.  Fire: Causes and precautions for fire safety in different type of building. BIS code for fire safety.  Flood: Design of building for flood zones.  **Unit-3 (Issues and concern for various causes of disaster)**  Disaster management, mitigation and preparedness; techniques of monitoring and design against the disasters  Management issues related to disaster, mitigation through capacity building, legislative responsibilities of | | |
| **Unit-4 (Disaster management)**  disaster mapping, assessment, pre-disaster risk and vulnerability reduction, post disaster recovery and rehabilitation; disaster related infrastructure development.  Remote-sensing and GIS applications in real time disaster monitoring, prevention and rehabilitation. | |
| Expected Outcome : Developed understanding of Disaster management, mitigation and preparedness; techniques. | |
| Reference Books:  1. BIS maps/ code books.  2. Manuals of National Disaster management Authority | |