



## Role of engineers in disaster management

### Description

#### Theme :-

- In the incidences of natural disasters, proper planning and mindful execution of technical support can reduce the substantial fall. With a strong engineer team, we can reduce the intensity of destruction and save thousands of lives.

#### Roles of Electrical Engineers :-

- Construction of drones and helicopters for easy transportation of food packets for all the victims who are in need is handled by the electrical technicians.
- Power control during heavy rainfall resulting floods and prevention of shocks with water being a good conductor of electricity is ensured by the electricians by timely cutting off the electricity supply.
- They also make sure secure earthing pits during the electrical installation which could be a major problem at the time of earthquake if not done right.
- Electrical motors and generator installation in drought-prone areas are done by electrical engineers which eradicate the further drying up of the region and provides the water supply for the victims.
- They have an important role in providing electricity to all kinds of disaster hit zones and giving them the luxury of power at the time of crisis.

#### Role of Civil Engineers:-

- With strong building foundation, the risk of collapsing of any building can be easily prevented. A geotechnical engineer is responsible for the construction of such high earthquake resistant buildings enhancing the infrastructure.
- For the flood control and destruction of dams, the hydraulic engineer provides all the required information about the various bridges and dams and advanced designs for prevention.



- City planners and project managers study the vulnerabilities providing proper guidelines required for provides rough and tough infrastructure withstanding any outer force.
- Rescue operations and safety escape routes must be established in every building along with possible reconstruction of the entire building is controlled by a structural engineer.
- Hazardous and toxic wastes, air pollution control, drainage development and radiation protection is handled by the environmental engineer which is essential once the disaster has struck in order to control the after effects.

### **Role of Mechanical Engineers:-**

- Contractors work along with the structural engineers to come up with shockproof infrastructure right before the construction of the building.
- The planning of raw steel used in bridges, tracks, buildings, which kind of cement to be used is done by the mechanical engineers.
- Mechanical Quality inspectors are very important who mainly approve the work of civil engineers at construction sites.
- Entire piping and ductwork are executed by mechanical engineers which are the critical part in the erection of infrastructures.
- They deal with all the government approval work which involves official permission and clearances.
- Project Commissioning of the all the raw products and systems installed during the building of any plant is governed by mechanical engineers with the support of electrical engineers.
- JKMEGA (Jammu and Kashmir Mechanical Engineer Graduate Associate) has appreciated the use of preventive mechanical gadgets such as motorized gates, ultrasonic level gauges which are very useful in flood control and take timely measures.

### **Conclusion:-**

Engineers have been a part of the age-old revolution of transforming the fate of the planet by applying novel technologies and automating things that were once done manually. RedR introduced in the year 1980 targets at uniting engineers to voluntarily work at short notice for re-establishment of man-kind in a disaster-hit area.Â

The mission of saving this planet earth cannot be done without including the expertise of mechanical and civil engineers who have been trained to deal with such situations withÂ tremendous mock drills and discipline. We cannot control such calamities but yes, we can definitely follow the saying – prevention is better than the cure.

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