K GOVIND

ROLL NO: 45

SEM 4

ASSIGNMENT-2

A BALANCED OUTLOOK ON LAW

The balanced outlook on law in engineering practice emphasizes both the importance of laws and regulations and their limitations in guiding and regulating engineering activities.Living harmoniously in society requires maintaining a balance between individual and collective needs. Ethical conduct, guided by laws, helps to achieve this balance.Laws are necessary because individuals may not always act responsibly, and the competitive nature of free enterprise may not prioritize moral initiatives.Laws ensure a minimum level of compliance.Some examples of this are:

* The Babylonian Building Code, established by Hammurabi in 1758 BC, enforced strict regulations on builders. It mandated that if a builder constructed a faulty house resulting in the death of the homeowner, the builder would face severe consequences, including death. Additionally, if the house caused harm to others or property damage, the builder was required to compensate accordingly and repair any defects at their own expense.While this code was strictly adhered to in ancient times, its relevance and approval have diminished in contemporary society.
* Alfred Guthrie, an engineer from Illinois, conducted extensive inspections of approximately 200 steamboats, funded by himself. He identified the causes of boiler explosions, a common hazard due to the increased speed of boats. Guthrie's findings were compiled into a report, which was later published by Senator Shields of Illinois and incorporated into Senate documents. These recommendations ultimately became law, prompting the American Society of Mechanical Engineers (ASME) to establish manufacturing standards for steamboats.Here the law came to effect much after many accidents showing an important fault.

ROLE OF PROPER LAWS:

The proper role of laws in engineering is to establish minimal standards of professional conduct, provide motivation for ethical behavior, and serve as moral support and defense for those acting ethically. Key principles include:

* Laws should be seen as guidelines for responsible experimentation, making engineers accountable for safe conduct.
* Precise rules and sanctions are appropriate for ethical misconduct that endangers public safety.
* Rules should not be overly prescriptive, especially in complex or lengthy experimentation, to allow for flexibility.
* Regulations should be broad yet hold engineers accountable for their decisions.
* Engineers, through their professional societies, should participate in framing and amending rules while avoiding conflicts of interest.