

7.1.3

Describe the facilities in the Institution for the management of the following types of degradable and non-degradable waste (within 500 words)

Solid waste management

Liquid waste management

**Biomedical waste management
E-waste management**

Waste recycling system

Hazardous chemicals and radioactive waste management

Response:

The facilities in the Institution for the management of the following types of degradable and non-degradable waste

1. Solid waste management
2. Liquid waste management
3. Biomedical waste management
4. E-waste management
5. Waste recycling system
6. Hazardous chemicals and radioactive waste Management

TKR College of engineering & Technology has designed methods for the management of waste generated in the campus using the basic waste management strategy of 3R's: Reduce, Reuse and Recycle i.e., Reduce the amount of waste generated, Reuse everything to its maximum after proper segregation and cleaning and keeping things which can be Recycled aside and handed over to appropriate agencies. The waste generated in the campus include liquid waste and solid waste- both of biodegradable and non- biodegradable nature & chemical waste. No classified hazardous waste is generated in the campus. The environmental policy of the institute is to achieve zero discharge and complete utilization of waste with well-designed strategies to make the campus clean, hygienic and healthy.

The waste generated is classified into the following types:

1. Solid waste Management

Solid waste includes both biodegradable and non-biodegradable components. The non-biodegradable solid waste generated in the campus include, paper, plastics, metal cans etc. Biodegradable waste includes food waste, vegetable peels, leaves etc.

'Use and throw' items like plastic cups, plates etc. used in the college canteen are replaced by reusable items steel glasses and plates. Glass, paper and metal waste is sold for recyclers.

Food waste and non-biodegradable waste are collected in separate bins. Biodegradable waste is disposed off in four dumping yards of size 3m x 3m x 2m, specially earmarked for the purpose.

2. Liquid waste Management

Liquid waste that is generated in the institute falls into three following categories.

1. Septic tank effluents from various sanitary blocks, water used for washing and cleaning of utensils etc. from canteen
2. Wastewater from laboratories using chemicals
3. Wastewater from RO plant

As the college is located in rural un-sewered area, waste water generated from the sanitary facilities is disposed off into septic tanks located at different places in the campus and their effluents combined with canteen waste water is used for gardening, watering trees etc. The excess waste water will be directed into natural drain passing near by the college campus.

Waste water generated from the laboratories is very small in quantity; hence they are handled along with septic sewage.

3. E-waste Management

E-waste or electronic waste is created when an electronic product is discarded after the end of its useful life. E-waste mainly includes obsolete electronic devices, such as computer systems, servers, monitors, compact discs (CDs), printers, scanners, copiers, calculators, fax machines, battery cells etc. E-waste is disposed off through vendors.

4. Waste recycling system

RO plant waste water is diluted with canteen wastewater and used for gardening, watering trees etc.

The future vision of the college is to establish full-fledged sewage treatment plant for sewage treatment and recycling the same fully within the campus, thus achieving the goal of zero discharge campus.

