

# GOVERNMENT POLYTECHNIC



VALSAD

## PROJECT REPORT

### GREEN ROOF TOP

<b>SR NO</b>	<b>NAME</b>	<b>ENROLLMENT NO</b>	<b>NO</b>	<b>NAME</b>	<b>ENROLLMENT NO</b>
1.	SMIT M SONI.	166290306119	7.	SALONI H PRAJAPATI.	166290306112
2.	MAYUR U PATEL.	176298306017	8.	PREKSHA D PATEL.	166290306085
3.	KAUSHIK G PATEL.	176298306016	9.	SHREYA P PATEL.	166290306534
4.	DIVYANG D PATEL.	176298306010	10.	VAISHALI M PATEL.	166290306541
5.	OMSHIVANI G SONI.	166290306552	11.	KAILASH R KAPADIYA.	166290306511
6.	RUTVI K PRAJAPATI.	166290306111	12.	PRIYANKA B AHIR.	166290306502

## **ABSTRACT**

The study was divided into two parts. In the theoretical part, an analysis of the manifold effects of green roofs under economic aspects was carried out. Based on these results, a second part followed, which studied the profitability of objects with extensive green roofs. The numerous positive qualities and effects of green roofs are well known. Still, ecological grounds alone may not suffice to convince many people, For this reason, the emphasis of the thesis was placed on quantifying the economic advantages that a building owner could derive from a green roof. These are composed especially by:

- Extension of the lifespan of the roof membrane
- Subsidies
- Reduction of Stormwater fees
- Energy savings/ insulation

These effects are easily quantified, and economic analyses and comparisons of the objects showed that these benefits can oppose the inevitable expenses associated with installing and maintaining green roofs.

## **MAIN PURPOSE**

❖ The main purpose of the project is to provide space for agriculture by growing the crops on terrace. Which is also known as terrace farming.

❖ The main features of this technique are as follows.

- Attractive looks of building.
- To reduce the temperature.
- To reduce the pollution health organic.
- To increase the growth of crops/vegetables.
- Consumption at site will reduce need of cold storage.
- Utilize space which otherwise is idle for most of time.

## **METHODOLOGY**

Stage 1. Prepare site.

Stage 2. Design a load capacity without green roof and with green roof.

Stage 3. Installation a various layers on dead space.

Stage 4. Identify the problems due to roof top plantation.

Stage 5. Procurement of various materials and preparing experimental set up.

Stage 6. Result.

## **BENEFITS**

- ❖ In addition to the thermal advantage which is the focus of this thesis, there are other advantages of a green roof installation. A green roof is a valuable amenity that enhances the worth of the structure it occupies and generates tangible benefits in the form of financial returns as well as quantifiable environmental benefits. By utilizing wasted roof spaces multiple objectives may be achieved including storm water management; Urban Heat Island Mitigation; longer life for roof membrane; habitation for urban wildlife and aesthetic value addition etc.

### **BENEFITS FOR THE SOCIETY:**

- By selling the products of terrace farming one can generate extra income.
- One can save electricity as by the covering of farming. There is cooling in the house due to which there is no use of air conditioning.
- Organic farming.
- No cold storage required.

### **COUNCLUSION**

- ❖ It has been proven that green roof could provide numerous benefits to the environmental performance of the building. However, in context of Malaysia, this is not commonly practice. Therefore, a progressive effort should be induced among the Malaysian researchers to conduct more research on green roof technology.
- ❖ Over the last couple of years many new green roof installations have been built around the world but little research into the performance of green roof systems in composite climate has been conducted. The literature that exists consists primarily of studies carried out in the extreme hot and cold climates.

- ❖ Green roofs are a substitute for natural landscaped areas at ground level which are scarce in urban centers like Delhi. The Landscape roofs offer many benefits, starting with the additional building insulation, lower requirements for air conditioning and energy, mitigate the heat island effect, reduce the total area of impervious dark surfaces in city to name a few. With emergence of Delhi as a major urban center of India, green roofs can become a part of the local building practices to improve the urban way of life.

## APPENDIX



**(SITE SELECTION AND MEASURING)**



**(COLLECTING OF SOIL FOR PLANTATION)**

**(COLLECTING OF SOIL FOR PLANTATION)**



**( MASONARY WORK )**



**(ROOF MAMBRAN LAYER INSTALLATION)**







**(PLACING OF DRAINAGE SHEETS)**



ING)



**(PLANTATION)**



**(PROVIDED DRIP IRRIGATION SYSTEM)**



**(AFTER 10-15 DAYS)**

