**ASSIGNMENT 06**

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**Q 6.1:**

To compute the surface area of the given cone with radius and height , let us consider a disc centred on the X-axis with infinitesimal height and radius .

Now,

The area of the side surface of the disc will be .

The surface area of the cone = .

**Q 6.2:**

, where .

1. Normalization constant:
2. Marginal Density Function:

Conditional Density Function:

Sampling functions with :

and

**Q 6.3:**

Let

.

, where .