**MGM University**

**Jawaharlal Nehru Engineering College,ChhatrapatiSambhajinagar.**

**Course : Single and Multivariable Calculus Program: FY B.Tech**

**Academic Year 2023-24 Part-I Unit 4 Course Code: APS21BSL101**

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* 1. Evaluate .
  2. Evaluate.
  3. Evaluate over region R bounded by the curves :

and line , and .

* 1. Evaluate over triangular region and in first quadrant.
  2. Change the order of integration :
  3. Change the order of integration and evaluate:.
  4. Find by double integration the area included between the curves : and line .
  5. Find by double integration the area included between the curves : and line .
  6. Find by double integration the area included between the curves : and line in first quadrant.
  7. Evaluate :
  8. Find by triple integration, the volume of solid bounded by the surface defined by equatioins :
  9. Find the mass and centre of mass of a triangular lamina with vertices and if the density function is

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