PADRE CONCEIÇÃO COLLEGE OF ENGINEERING
VERNA-GOA

Roll No:							

Assignment- (Unit-II)

Semester & Scheme: IV (RC 2019)
Course: FE210 Mathematics-II
Course Instructors: 1. Adarsh Kumar Handa
2. Komal Paroolkar

Date: 13 /06/2022
Due Date: 20/06/2022

		CO	CL
Q1.	**Find** the area bounded between the parabolas $y^2 = 4ax$ and $x^2 = 4ay$	**FE210.3**	**CL3**
Q2.	**Find** the volume of the solid generated by revolving the area bounded by $y^2 = 4x$ and $x = 1$ about x-axis	**FE210.3**	**CL3**
Q3.	**Evaluate** $\iiint \frac{dx\,dy\,dz}{(1+x+y+z)^3}$ over the region bounded by x = 0, y = 0, z = 0 and x + y + z = 1	**FE210.3**	**CL3**
Q4.	If $\mathcal{R}$ is the region bounded between the spheres $x^2 + y^2 + z^2 = a^2$ and $x^2 + y^2 + z^2 = b^2$, a > b **evaluate** $\iiint_{\mathcal{R}} \frac{\mathbf{dxdydz}}{(\mathbf{x^2+y^2+z^2})^{\frac{3}{2}}}$ using spherical polar coordinates.	**FE10.3**	**CL3**
Q5.	If $\mathcal{R}$ is the region bounded by the cylinder $x^2 + y^2 = 1$ and the plane z = 2 and z =0. **Evaluate** $\iiint_{\mathcal{R}} z(x^2 + y^2)dxdydz$, using cylindrical polar coordinates.	**FE210.3**	**CL3**

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