

American International University-Bangladesh

**Faculty of Science & Technology**

**Department of Mathematics**

**Sample Question**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **1.** |  |  | | |  |
|  | **a.** |  | **b.** | **c.** |  |
|  |  |  | | |  |
| **2.** |  |  | | |  |
|  |  | Evaluate using **left/ right/ middle Riemann** sum with 4/6 subintervals. | | |  |
|  |  | Evaluate using **Trapizoidal rules** with 4/6 subintervals. | | |  |
|  |  |  | | |  |
| **3.** |  |  | | |  |
|  | **a.** | Sketch the region bounded by the curves. Also find the area of the bounded region. | | |  |
|  | **b.** | Sketch the region bounded by the curves Also find the area of the bounded region. | | |  |
|  |  |  | | |  |
| **4.** |  |  | | |  |
|  | **a.** | Sketch the region bounded by the curves . Find the volume of solid generated by revolving the region about the axis. | | |  |
|  | **b.** | Sketch the region bounded by the curves . Find the volume of solid generated by revolving the region about the axis. | | |  |
|  |  |  | | |  |
| **5.** |  | **Gamma/ Beta functions** | | |  |
|  | **a.** |  | **b.** | **c.** |  |
|  |  |  | | |  |
| **6.** |  |  | | |  |
|  | **a.** |  | **b.** **c.** | |  |
|  | **d.** |  | **e.** | |  |