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| **Student’s Name** | **Student’s ID** | **Group Number** | **Lecturer’s Name** |
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| **Question Number** | **I** | **II** | **III** | **IV** | **Total** |
| **Mark** |  |  |  |  |  |

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| --- |
| **Question I: A. Choose the correct answer (8 Marks)** 1. **If thenequals**
2. **(b)**

**(c) (d) None of the previous** |
| 1. **equals**

 **(a) (b)** **(c) (d) None of the previous** |
| 1. **The value of that satisfies the equation is**

 **(a) (b)**  **(c) (d) None of the previous**1. **The value of is**

 **(a) (b)**  **(c) (d) None of the previous** |
| 1. **The partial fractions of are**

 **(a) + (b)+**  **(c) + (d) None of the previous** |
| 1. **If is the rectangular coordinates representation of a point, then the corresponding polar coordinates representation is**
2. **(b) ,**

**(c) (d) None of the previous** |
| 1. **If is a polar coordinates representation of a point, then the corresponding rectangular representation is**
2. **(5,0) (b) (-5,0)**

**(c) (0,5) (d) None of the previous** |
| 1. **The graph of is**
2. **A circle (b) A rose with 2 leaves**

**(c)A rose with 4 leaves (d) None of the previous** |
| **B. Find parametric equations for the line segment joining the points (4,-2) and (2,-1). (3 Marks)** |
| **C. Identify the plane curve for 2 (3 Marks)** |
| **Question II: A. Compute the following integrals****(i) (3 Marks)** |
|  **(ii) (3 Marks)** |
| **(iii) (4 Marks)** |
|  **(iv)**  **(3 Marks)****B. Determine whether the following improper integrals converge or diverge****(i) (3.5 Marks)** |
| **(ii) (2.5 Marks)** |
| **QUESTION III**1. ***Sketch* and *Find*  *the area* of the region bounded by the graphs of (5 Marks)**

  **and** |
| 1. **Let R be the region bounded by the graphs of and . *Sketch R*  and *Find the volume* of the solid resulting by revolving R about the axis. (4 Marks)**
2. **Find the arc length of the portion of the curve of**  **from**  **to**  **(5 Marks)**
 |
| **QUESTION IV*****Sketch* and *find the area* of the region  for. (5 Marks)** |

 Good Luck☺