**B.Sc. DEGREE EXAMINATION, APRIL 2017.**

**II YEAR — III SEMESTER**

**Major Paper V — DIFFERENTIAL EQUATIONS AND LAPLACE TRANSFORMS**

**Time : 3 hours Max. Marks : 75**

**SECTION A — (10 × 2 = 20 marks)**

**Answer any *TEN* questions.**

1. Solve *p3 – 7p – 6 = 0.*
2. Write clairaut’s equation.
3. Find the complementary function of 
4. Solve the equation 
5. Form a partial differential equation from 
6. Eliminate the arbitrary function f from and from the PDE.
7. Solve *pq=1.*
8. Find the value of .
9. Write down the value of .
10. Find the value of .
11. Write down the Laplace Transform equation for the differential equation 
12. Write down the Laplace Transform equation for the differential equation .

**SECTION B — (5 × 5 = 25 marks)**

**Answer any *FIVE* questions.**

1. Solve  where .
2. Solve .
3. Solve .
4. Solve *Z= px+qy+p2q2.*
5. Find .
6. Find 
7. Using Laplace Transform solve



[P.T.O.]

**SECTION C — (3 × 10 = 30 marks)**

**Answer any *THREE* questions.**

1. Solve equation.
2. Solve , y = x + atan-1p.
3. Solve 
4. Find 

Find .

1. Using Laplace Transform to solve given that and .

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