

**GOVERNMENT COLLEGE OF ENGINEERING , AMRAVATI**

**(An Autonomous Institute of Govt. of Maharashtra)**

**CT- II W-2018**

**SHU301 ENGG. MATHS-III (CE, MECH )**

**Marks :15**

**TIME- 1 HOUR**

**Date: 24/09/18**

**Q .1) Solve:  $u_{xx} = u_y + 2u$  with  $u(0,y) = 0$  ,  $u_x (0,y) = 1+e^{-3y}$  by using method of Separation of variables.**

**Q. 2) Attempt any four :-**

**a) Form PDE from  $2z = (ax + y)^2 + b$**

**b) Solve:  $x^2 p^2 + y^2 q^2 = z^2$**

**c) Solve:  $(x^2 - yz)p + (y^2 - zx)q = z^2 - xy$**

**d) Evaluate  $L [e^{-4t} \frac{\sin 3t}{t}]$**

**e) Find L .T. of  $\cosh^4 4t$**