

KARIMPUR PANNADEVI COLLEGE

MATH-H-GE-T-02

Internal Assessment, 2020

Duration: 30 mins.

Full Marks: 10

Answer any two questions

Q.1) Find the ordinary differential equation of the curve $e^{y-x} = \lambda(y+x)$, λ being a parameter. 5 marks

Q.2) Solve $\frac{dy}{dx} = \frac{y}{x} + \sin \frac{y}{x}$. 5 marks

Q.3) Reduce the equation $x^2(y - px) = p^2y$ to Clairaut's form by making the substitution $x^2 = u$ and $y^2 = v$ and then find its general solution. 5 marks

Q.4) Form a partial differential equation by eliminating a and b from $z = (x+a)(y+b)$. 5 marks