Answer on Question #59452 – Math – Differential Equations

Question

1. The order of the differential equation is the

I. Order of the highest order derivative appearing in the equation

II. Order of the lowest order derivative appearing in the equation

III. Order of the second highest order derivative appearing in the equation

IV. Last order of the highest order derivative appearing in the equation

Answer: I. Order of the highest order derivative appearing in the equation

Question

2. If $u = f(x, y)$ be a function of two independent variables x and y, then $\frac{\partial u}{\partial y}$ is equal to

I. $\lim\limits_{\Delta x \to 0} \dfrac{f(x+\Delta x, y) - f(x,y)}{\Delta x}$

II. $\lim\limits_{\Delta y \to 0} \dfrac{f(x, y+\Delta y) - f(x,y)}{\Delta y}$

III. $\lim\limits_{y \to 0} \dfrac{f(x, y+\Delta y) - f(x,y)}{\Delta y}$

IV. $\lim\limits_{\Delta y \to 0} \dfrac{f(x+\Delta x, y) - f(x,y)}{\Delta x}$

Answer: II. $\lim\limits_{\Delta y \to 0} \dfrac{f(x, y+\Delta y) - f(x,y)}{\Delta y}$.

Question

3. The general solution of a first order differential equation normally contains one arbitrary constant which is called a…

I. Family of curves

II. Perimeter

III. Curve

IV. Parameter

Answer: IV. Parameter.