Assignment 3

Due on: 2020-02-14, 23:59:59 IST

1. Identify the equation which provides the relationship between permeability and porosity of a material.

2. The permeability of a material is given by $k = \frac{L}{t}$, where $L$ is the thickness of the material and $t$ is the time required for a given volume of fluid to pass through the material. This equation is known as the Darcy equation.

3. The Weibull distribution is often used to describe the distribution of permeability values in a porous medium. The probability density function of the Weibull distribution is given by $f(k) = \frac{c}{\beta} \left(\frac{k}{\beta}\right)^{c-1} \exp\left(-\left(\frac{k}{\beta}\right)^c\right)$, where $k$ is the permeability, $\beta$ is the scale parameter, and $c$ is the shape parameter.

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6. True

7. False

8. True

9. False

10. True

11. True

12. True